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DISTURBANCES OF RESPIRATION DUE TO NUCLEAR AND INFRANUCLEAR DISEASE *

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Among what may be termed the triumphs of modern medical investigation, there are probably none more interesting historically or more illuminating in their results than investigations in external and internal respiration.

Although physiologists have greatly enlarged our views and knowledge of the subject, respiratory phenomena do not enlist the interest of clinical men so much as the growing knowledge of respiratory physiology warrants.

Physiology of respiration involves a number of problems, viz.: the lung as an aerating organ, the mass movement of blood, the partial pressure of carbon dioxid and oxygen in alveolar air and circulating blood, products of metabolism and finally the nervous control of respiration which may be modified by alterations in the bulbar respiratory center cerebral cortex and pulmonary branches of the vagus.

I propose to describe some alterations in the nervous control of respiration which occur in several diseases we commonly see, tabes dorsalis, sclerosis of the brain arteries, tuberculosis of the mediastinal lymph glands and aneurysm of the first portion of the aorta.

Several years ago I read a paper before this Section in which were described some experiences with patients who had incipient tabes. These patients exhibited grave symptoms after receiving one-quarter of a grain of morphin hypodermically. The patients suddenly lost consciousness and ceased breathing for twenty minutes. During this period of unconsciousness with suspension of respiration there was such pronounced vasomotor relaxation in the arteries of the extremities that there was a centripetal pulse in the veins of the hands which was distinctly visible and palpable. Artificial respiration was employed for twenty minutes when suddenly automatic respiration was resumed and with it consciousness returned, the arteries and veins both contracted and the centripetal venous pulse disappeared. At that time I made a careful search in literature to find some instances of death after small doses of morphin to see if some of these cases might not be of the character I described. None could be found in literature but after the publication of the article I received several communications from physicians who had seen such cases. One of them is of particular interest, as it ended fatally and suggests the probability of other unpublished cases. The case was reported to me by Dr. Poate of Black Creek, N. Y.

The patient was a young man in the pre-ataxic stage of tabes who was given ¼ grain of morphin with 1/200 of sulphate of atropin on account of girdle pains. Forty minutes after the injection, the patient became unconscious and ceased breathing. The physician, who had left the house, was hastily summoned. Fully forty minutes elapsed from the time apnea and unconsciousness began until the physician was again in attendance. The patient's heart was still beating, but feebly and irregularly. Death occurred within a few minutes after the physician's return, so we can be sure the heart continued to beat for nearly three-quarters of an hour after respiration ceased.

This is the only case I know of the kind which proved fatal but, as five cases were privately reported to me directly after the publication of my article in 1907, it seems probable that among the unreported cases there are some which ended fatally. My own two cases and four of those reported by other physicians regained their tolerance for morphin after the tabes made further progress. I mention this point at present as it has some significance in common with other instances of apnea which have been ascribed to an elevation of the threshold of the respiratory center. I have seen several patients with cardiovascular disease who were greatly distressed with slumber apnea and waking hyperpnea early in the progress of their disease before air hunger from vigorous exercise during the waking hours made its appearance. And yet these same patients were not disturbed by slumber apnea a year later when the slightest muscular exercise was followed by distressing air hunger.

Some patients with cardiovascular disease develop Cheyne-Stokes breathing after a moderate dose of morphin. Other patients who suffer from Cheyne-Stokes breathing during their waking hours, or have their rest disturbed by slumber apnea and waking air hunger, seem to suffer less from the symptoms we associate with a high threshold of their respiratory center after the administration of morphin. This is contrary to our expectation if we are dealing purely with the sensitiveness of the respiratory center to the partial pressure of carbon dioxid and oxygen in the arterial blood. It is a common experience to see a patient with arteriosclerosis develop Cheyne-Stokes breathing immediately after a hemiplegia from arterial thrombosis develops and then recover from all respiratory symptoms as he recovers from his hemiplegia. Yet during all these periods there will not be the slightest indication of any change in the mass movement of blood.

A few years ago I saw a man 65 years old who had marked arteriosclerosis with a high blood-pressure, great cardiac enlargement and anasarca, whose chief distress was alternating apnea and hyperpnea. During the apneic periods, which lasted from thirty-five to fifty seconds, he became drowsy and

* Address on Medicine read before the Section on Practice of Medicine of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

when he was urged during the apnea to take a breath he would turn his head from side to side and make an ineffectual effort to breathe. He would lift the thoracic cage but did not open the glottis, as was apparent by the retraction in the suprasternal notch and the epigastrium and the absence of a respiratory murmur when the stethoscope was applied over the trachea. This man recovered from his Cheyne-Stokes respiration after the liberal use of nitroglycerin and caffein, although the anasarca was unchanged and the disease ended fatally two weeks later.

The slumber apnea seems to be associated with a light sleep in many instances, whereas, a deep sleep is undisturbed. All of these facts point to some influence on the respiratory center from the cerebral cortex. So it looks as though we are in many instances dealing with something more than an altered bulbar respiratory center.

During the past year Dr. J. J. R. Macleod and I have been making a series of observations on a patient with cardiopulmonary disease who is persistently cyanotic without dyspnea and in whom the alveolar air shows a content of carbon dioxid which ranges from 7 to 9 per cent., a percentage which no man in health can endure, yet this man always developed apnea from ten to twenty seconds as he would go into a doze while we were taking tracings of his respiratory movements in a pneumograph.

Unverricht[1] made similar observations in studying the relative effects of morphin and atropin on respiration. He saw some patients who lost their Cheyne-Stokes respiration after morphin was given. Unverricht thinks the periodic breathing sustains a certain relation to cortex excitation, as some of his patients had periodic breathing during light sleep and lost their periods of apnea in profound sleep. Unverricht says that in his animal experiments when sleep was induced by morphin or chloral a mild degree of narcosis was associated with Cheyne-Stokes breathing, but a larger dose of the drug caused the Cheyne-Stokes breathing to cease. He also mentions the fact that he has seen Cheyne-Stokes respiration appear in an animal from the mere procedure of exposing the brain.

That degeneration of the vagal nuclei play an essential rôle in apnea is well supported by pathologic evidences. But the kind of disturbances is not always the same. The case of paretic tabes reported by Egger[2] had persistent bradypnea (6 per minute) and would have apnea for one minute followed by three respirations during the second minute directly after a dozen deep respirations were rapidly taken. There was then a period of short apnea like the "hunting" of the respiratory center as described by Haldane. There was no alteration of apnea with hyperpnea when the patient was left to spontaneous respiration. That there was a heightened threshold to the respiratory center is apparent from the persistent bradypnea, and further reduction of the respiratory rate after the carbon dioxid was washed out of the blood by forced breathing. But that is a much simpler phenomenon than Cheyne-Stokes respiration in patients with arterial disease. And it also differs from the phenomenon of "hunting" after apnea has been induced in healthy subjects by prolonged forced breathing.

In the tabetic cases, we are dealing with a process which is limited to the bulbar nuclei and is not associated with disturbances in the higher cerebral structures, as we know occurs in arteriosclerosis and may play a part in experiments of forced breathing in healthy subjects.

1. Unverricht: Centralbl. f. klin. Med., Supplement, p. 55, 1892.
2. Egger: Jour. d. physiol. et path. gen., 1899, 1, 68.

Two cases of Cheyne-Stokes breathing from arterial disease are reported in Guys Hospital Reports.[3] Both patients were examined pathologically by Buzzard, who reported hemorrhages and marked nuclear degeneration in the dorsal nuclei of the vagus. Both these patients had high arterial pressure, cardiac hypertrophy and hemiplegia. In both patients the Cheyne-Stokes breathing was changed to a normal rhythm when oxygen was inhaled by using a mask but not when the oxygen was given through a funnel suspended over the face as oxygen is usually given. In my own experience, two such patients with hemiplegia changed from a pronounced Cheyne-Stokes to a normal respiratory rhythm when a good stream of oxygen was given through a suspended funnel. The change was very prompt. If we started the oxygen in the middle of the hyperneic period the succeeding apnea was abolished. From the physiology of external respiration we can understand how promptly the partial pressure of oxygen may be raised in the arterial blood and thus lower the threshold of the respiratory center. But this explanation either includes only a part of the process involved or different diseases of the respiratory center give varying respiratory symptoms. The changes of the respiratory rhythm which have been ascribed to some modification of the respiratory center cannot be explained purely from independent and reciprocal changes in the partial pressure of oxygen and carbon dioxid, so Haldane and Zuntz have offered the presence of lactic acid (which forms under deficient oxidation of tissues) as a third factor in causation of altered respiratory rhythm from deficient oxidation of the respiratory center. Possibly we may learn that deficient oxidation of the center and partial degeneration of the center will give different symptoms, but there remains much to be done in the way of clinical observation, physiologic experiment and pathologic studies before we can assign certain symptoms to physiologic and other symptoms to anatomic changes in the bulbar centers.

Enough has been shown, however, to clinch several practical points, viz.: (1) that the use of respiratory depressants must be employed with great caution when there is any reason for suspecting an anatomic degeneration in the respiratory center, and (2) that the use of oxygen inhalation will restore the normal respiratory rhythm when alternating apnea and hyperpnea are caused by deficient oxidation of the blood, as in mountain sickness, or when the same altered rhythm is associated with arterial disease. Thus far I have tried to show that impulses from the cerebral cortex may share in the respiratory symptoms which we have been in the habit of ascribing solely to changes in the bulbar respiratory center.

I now wish to describe some instances of disturbed respiration which originate from disturbed peripheral innervation of the lung. Symptoms may arise in several ways from this source. There may be a neuromuscular reaction as evidenced by spasm of the bronchioles resulting in pulmonary emphysema with great distress in breathing, i. e., genuine dyspnea attended with cyanosis from deficient lung ventilation, or the patient may have tachypnea without cyanosis and without impaired lung ventilation and without genuine air-hunger, although the respiratory distress is very severe.

The first instance of emphysema from this source I wish to describe was in a little girl 6 years old who had recurring attacks of emphysema from caseous tuberculous glands of the

3. Pembrey: Guy's Hospital Reports, lxi, 25.

mediastinum. This child formerly had a chain of suppurating tuberculous glands on each side of the neck from which the scars were very conspicuous along the anterior border of each sternomastoid muscle. For the year preceding the time I was called to see the child she had been having attacks of asthma, which would come on with great suddenness, last about half an hour and then cease as suddenly as they began. The attacks occurred only once in two or three months. During the remaining time the child was regarded as being quite comfortable, although she was recognized as poorly developed and without much endurance.

As I saw the child she was cyanotic and extremely dyspneic. The dyspnea was expiratory and percussion showed that the lungs filled the pleural sinuses. The pulse-rate was 120 and the heart was not dilated. In the midst of a respiratory phase, all traces of respiratory distress ceased so that within a few seconds there was a transformation from great distress to complete respiratory comfort. The lower borders of both lungs ascended three fingers' breadth; all sibilant râles disappeared This transformation was so sudden that it could not have occurred otherwise than from some neuromuscular activity.

That vagus excitation can cause spasm of the bronchial muscles and thus cause emphysema was clearly shown by Einthoven's[4] experiments which were confirmed later by several observers who employed Einthoven's methods.

After the emphysema subsided in this child the pulse-rate remained the same (120) and the patient remained absolutely at rest without any sign of discomfort. About thirty minutes after the emphysema subsided, death suddenly occurred without a moment's warning. At the autopsy, the mediastinum was found completely filled with caseous tuberculous glands. Both vagi were included in the midst of this inflammatory mass. Although the vagi were not examined histologically the gross pathology and the character of the symptoms justify a diagnosis of vagus neuritis.

Another case of similar character occurred at Lakeside Hospital two years ago, in a man who had an aneurysm of the arch of the aorta. Both vagi were firmly embedded in the periaortic tissue and showed by staining of a cross-section that there was marked atrophy of the nerve elements in both nerves. This man gave a history of cough with dyspnea on exertion. But until the day before he was brought to the hospital there had never been any severe respiratory symptoms. The dyspnea came on suddenly and with great severity, so that the attending physician described his patient as suffocating.

Physical examination revealed some striking inconsistencies. The patient was extremely dyspneic but the only assignable cause for dyspnea was a moderate pulmonary emphysema. There was no pulmonary edema and no signs of bronchitis beyond those which accompany the usual acute bronchial asthma. There were no evidences of a severe disturbance in the mass movement of blood, such as dilated jugular veins, engorged liver or edema. The systolic and diastolic arterial pressure and the excursion of the arterial wall were consistent with a good systolic output of the ventricle. The heart-rate was 120. It was, however, quite apparent that the man was suffering from an impairment of external respiration far greater than could be accounted for by the cardiovascular or pulmonary signs.

During the physical examination the area over the manubrium was found quite dull and gave a distinct tracheal tone with gentle percussion. Our interpretation of the case was mediastinal tumor with vagus disease. The patient died two hours after admission to the wards. The autopsy revealed an aneurysm of the ascending arch as large as a man's fist. Both vagi showed the gross and histologic evidences briefly described. It is true the man had an aneurysm, but aneurysm did not cause his death. Death was due to vagus disease. The antemortem diagnosis of tumor with vagus neuritis was a correct physiologic diagnosis but anatomically it was wrong.

4. Einthoven: Arch. f. d. ges. Physiol. (Pflüger's), 1892, li, 367.

Atropin sulphate 1/50 grain was given subcutaneously but did not affect the pulse-rate or the emphysema.

At autopsy the lungs did not reveal the slightest signs of atrophic emphysema or any other disease—a fact which confirmed the diagnosis of vagus emphysema.

It was unfortunate that oxygen was not given in this case, as its results would have some bearing on the relations between the vagi and the absorption of oxygen from the alveolar air. I think this is of importance in view of the difference of opinion which exists among physiologists as to whether the absorption of oxygen by the blood from the alveolar air is a purely physical or partly a so-called vital process. So far as my own observations go, dyspnea and cyanosis from vagus disease are intimately linked with a neuromuscular pulmonary emphysema.

The two following cases had no emphysema nor cyanosis nor extreme air-hunger, all of which characterized the two preceding cases of vagus disease. They had, however, extreme respiratory distress of quite a different character.

The first patient of this kind was admitted to Lakeside Hospital Oct. 21, 1910. He was brought to the accident ward with acute cardiac dilatation and pulmonary edema and extreme dyspnea. On entrance he was bled 20 ounces and 1 milligram of strophanthin was given intravenously.

Twelve hours later, when I first saw the patient, he was very comfortable. His personal history contained an account of an attack of articular rheumatism seven years before, since which time his physical endurance had been impaired. There was also a doubtful history of a syphilitic infection prior to the attack of rheumatism. The heart's area of dulness extended 15 cm. to the left of the median line in the sixth intercostal space and the right precordial border was 5 cm. to the right of the median line in the fourth interspace. The aortic area of dulness was 5 cm. to the right of the sternum at the right second interspace. The maximum systolic pressure in the artery was 152. The diastolic pressure was very low and the auscultatory signs confirmed an insufficiency of the aortic valves.

A skiagram showed a marked dilatation of the first portion of the arch of the aorta, which was the most essential pathologic lesion in this patient.

After the patient had been one week in the hospital and seemed comparatively comfortable, he began having attacks of dyspnea which lasted from a few minutes to several hours. The resident physician gave him injections of morphin (when the attacks were prolonged) but after a few days the attacks came more frequently and the morphin gave him unsatisfactory relief. These attacks of dyspnea occurred between November 5 and 15, i. e., from the sixth to the fifteenth day after admission to the ward.

November 15, the patient had an attack during the ward visit while we were making some observations on his condition. The man was breathing twenty times a minute and had a pulse-rate of 80. While I had my finger on his pulse the rate suddenly dropped to 40 per minute. By the time the new rate of 40 had progressed for about four cardiac cycles, very rapid breathing commenced. The rate of respiration was suddenly increased to 60 per minute. The patient had a tachypnea and not a hyperpnea. The thorax never attained the expiratory phase. The excursion of the thorax was always far above the abscissa. During the bradycardia with tachypnea, the blood-pressure, systolic and diastolic, remained unchanged. There was no change in the volume of the heart. The jugular veins were not dilated nor did their pulsations change and there were no signs in the lung nor in the heart to suggest pulmonary stasis. There was no cyanosis. The patient did not offer any sign to suggest an impairment of the mass movement of blood nor any transient change in the lung or bronchioles to impair the lung as an areating organ. Indeed, it was particularly noted there were no evidences present which we associate with emphysema.

When the patient was asked if he was short of breath his reply was "yes." "But do you feel air hunger as one experiences after a long hard run?" was asked. "No," was the patient's reply, "I feel very much distressed and a strange feeling of pressure seems to strike me here (pointing to the midsternal region) which compels me to breathe rapidly."

The paroxysm of bradycardia naturally suggested the use of atropin. We were gratified to find the bradycardia and tachypnea would both subside in ten minutes after the hypodermic injection of 1/100 grain of atropin sulphate. This was given routinely morning and evening, after which treatment there was no return of the paroxysms. The patient had relief by atropin from several paroxysms before the routine treatment was adopted.

That bradycardia of vagal origin should be relieved by atropin is familiar enough, but why should tachypnea be arrested by atropin? I find a report of S. Baglioni[5] which has an interesting bearing on this experience. Baglioni discusses the experiences of his predecessors in experimenting on the pulmonary branch of the vagus, all of which seemed to prove that excitation of the pulmonary vagus branch had two effects: one was to arrest the heart-beat more promptly and with a lesser stimulus than when the central end of the vagus trunk was excited, and the other effect was an arrest of respiration.

Baglioni, however, found that what was regarded as apnea was in reality a very rapid tachypnea which played high above the abscissa in the tracings. In reviewing the tracings made by his predecessors he calls attention to the very significant fact that their tracings show apnea during the inspiratory phase whereas apnea always occurs in the complete expiratory phase.

In this patient we have an anatomic lesion, i. e., aneurysm of the first portion of the arch of the aorta which is very favorable for excitation of the pulmonary branch of the vagus. The tachypnea (without air hunger or circulatory or pulmonary impairment) came on coincidently with bradycardia and both were relieved by atropin in ten minutes after hypodermic injection.

March 11, 1911, we received another patient in the women's ward who confirmed the experience above described in a very interesting way. The patient was 43 years old. She gave a history of syphilis, the physical signs and skiagram revealed an aneurysm of the first portion of the arch of the aorta.

After the patient recovered from very severe symptoms which led to her being brought to the hospital, she commenced to have paroxysms of tachypnea. The respiratory rate was usually from 18 to 20 per minute. The attacks of tachypnea would come on with great suddenness without cyanosis or any signs of cardiac or pulmonary impairment, and unlike the former case, the tachypnea was not associated with any change in the heart-rate.

The description of the attacks which was recorded by Dr. Taylor (resident physician) is particularly interesting, as it accords so well with Baglioni's account of the results from excitation of the pulmonary branch of the vagus. February 15, four days after admission, the notes read as follows:

"Patient had a second attack of tachypnea this evening. When first seen the respiration was 36 per minute and the heart-rate 88. The air hunger consists in an inability to get rid of her air. She would take a deep inspiration and then hold it, at the same time giving the impression of numerous small respiratory efforts at the height of the inspiratory phase. Then with extreme effort, using all the muscles of expiration, she would expel the air from her lungs, only to take another deep inspiration and repeat the performance."

Atropin, 1/50 of a grain, relieved the distress in ten minutes. This patient had three such attacks which were relieved in ten minutes by atropin.

I have been able to find only one reported case which is like these last two described cases. Pal[6] describes the case of a young man with severe mitral stenosis in whom frequent attacks of tachypnea occurred. The respiratory rate would vary from 50 to 120 per minute. Inhalations of oxygen gave no relief. Pal says nothing about the use of atropin. His patient had tachypnea without slowing of the heart-rate. At the autopsy, Pal found the left vagus, at the hilum of the lung, was imbedded in a mass of enlarged lymph glands. The vagus was much thickened in this location. Unfortunately, through some misadventure, the specimen was spoiled so that no histologic examination of the nerve could be made.

1903 E. Seventy-Fifth Street.

ABSTRACT OF DISCUSSION

DR. YANDELL HENDERSON, New Haven, Conn.: So far as I know this is the first paper on the subject ever presented in America. During the past five years there has been an immense amount of interest shown by clinicians in the study of the circulation. The clinical aspects of arterial pressure have been studied especially by the methods of the physiologic laboratory. But a similar study by precise methods of the equally important subject of the clinical aspects of respiration has been neglected. Dr. Hoover's paper is the first step into this rich and important, yet unworked, field of clinical investigation.

One of the important points to be kept in mind is the fact that recent progress in physiology has shown that lack of oxygen is not a direct stimulus to respiration. It is not a lack of oxygen which causes us to breathe but the driving force of the carbon dioxid which is circulating in the blood. If the tension of carbon dioxid falls, there is a cessation of respiration until the reaccumulation of the necessary amount of carbon dioxid in the circulating blood again stimulates the center. In conditions of hyperpnea during and after muscular exercise, carbon dioxid, not oxygen, is the regulating factor of the amount of air that enters and leaves the lungs per minute.

There is, however, a complex reflex mechanism also involved in respiration. It determines the form of breathing—whether the breaths shall be shallow and rapid, or deep and slow. This reflex mechanism is similar to that which controls the finer movements of the legs in walking. Some of the disturbances of respiration which Dr. Hoover has described are clearly ataxic. They are wholly analogous to the phenomena of locomotor ataxia. It is interesting to notice, as Dr. Hoover has pointed out, that syphilis causes the same type of disturbances of respiration as of walking.

Another point to which especial attention should be called in connection with Dr. Hoover's observations is that Cheyne-Stokes respiration is really not a pathologic phenomenon. It is frequently met with in perfectly healthy human beings. The majority of healthy persons can readily induce in themselves a period of intermittent breathing; a couple of minutes of voluntary forced breathing is usually sufficient to start it. I have repeatedly noticed in healthy individuals, who have lain down to take a nap after a hearty meal, that this type of breathing comes on. During one of the apneic pauses the person will suddenly start in his sleep and become wide awake. This, I think, is essentially the same phenomenon as the sudden terrified awakening of Dr. Hoover's patients. They feel that they have stopped breathing. If the apneic stage has been prolonged the dyspnea would, of course, be proportionately violent. The probable explanation of this is that in such patients as Dr. Hoover has described the sensitiveness of the respiratory center is subnormal. It is probably further reduced below normal as the subject falls asleep. Accordingly the amount of carbon dioxid in the blood is insufficient to maintain breathing. The subject therefore stops breathing until half asphyxiated for lack of oxygen; then he suddenly awakes. For the relief of this condition I would suggest that before the patient tries to go to sleep a paper bag, or a mask connected with an open tube of

5. Baglioni, S.: Arch. Ital. de biol., 1909, lii, 236.

6. Pal: Wien. klin. Wchnschr., 1906, Nos. 47 and 48.

some length (say a piece of bicycle tire for example) should be held over the patient's face. Under these conditions a slightly excessive amount of carbon dioxid will accumulate in the person's lungs and blood. This amount would probably be sufficient to keep the respiratory center at work when the subject falls asleep. The occurrence of apnea and the terrified awakening would thus be prevented. Dr. Hoover's paper is certainly a valuable contribution to the physiology of respiration.

THE PROPER OPERATIVE PERIOD AND METHODS OF DRAINAGE IN PELVIC INFECTIONS *

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In acute pelvic infections, the mature judgment gained by long experience as to when and how to operate is of paramount importance. Rules of procedure may be laid down, but their proper application is a matter of personal equation.

To operate during the storm of pelvic flare-up frequently spells disaster. Nature must be given an opportunity to corral the infection by adhesions, and to develop immunity against the specific infection. However, if the patient is seen early and the diagnosis is positive, it is good practice to operate immediately. A history of previous attacks will aid materially in determining the course to pursue. Evidences of beginning general peritonitis, such as very rapid pulse or hyperpyrexia, with general abdominal rigidity and tenderness, are counter-indications to early surgical interference.

Cases which develop cellulitis accompanied by a full round cul-de-sac are best treated by a posterior vaginal puncture and a double drainage tube inserted for a few days. This procedure usually gives immediate relief, and entails no surgical risks. Half of these cases so treated would result in apparent cure, and further operative intervention is deemed unnecessary or is refused by the patient.

A large percentage of acute pelvic infections are gonorrheal in origin, and are best treated by palliative means. I believe that experience has taught the profession that gonorrheal infection, in a measure, runs a definite course. Early surgical procedure does not modify the course, and may only serve to spread the infection. Walling off the infected area and the production of active immunity seems Nature's method of handling the situation. The surgeon can do no more.

If there is a history of recurrent pelvic infections, more radical measures are called for than puncture and drainage. If the tubes remain enlarged and tender, and the patient complains of constant pain of greater or less severity, a radical operation should be advised. It can be performed advantageously in the interval, never during the acute attack, except when seen early. I advise waiting until three weeks after the subsidence of all acute symptoms, as evidenced by relief from pain and tenderness and the return of normal pulse and temperature. This will permit time for the absorption of exudate, thereby lessening the amount of adhesions. The inflammatory wall being stronger minimizes the danger of dissemination of infection.

In all chronic cases an operation is indicated when there is evidence of destruction of the tubes. If repeated acute attacks occur, an interval operation is safest and most advantageous. I have seen many patients treated by palliative means for long periods of time—tamponing, douching, suppositories, pessaries, posture, etc.—and receive temporary relief only.

In all these cases a long history of oft-repeated paroxysms could be elicited. These patients could have been placed in practically a normal condition if an early, careful, radical operation had been performed. During this long delay in resorting to rational surgical treatment, the repeated acute congestions and chronic inflammatory processes result in much gross pathology.

This physical and nervous distress causes the patient's nervous equilibrium to become greatly disturbed, resulting in various neuroses and occasional psychoses. And even after a radical operation these may persist for long periods of time, as it is well known that nervous tissue being the most highly organized, is the slowest of repair. This is but another very tangible and forcible argument for early causal surgery.

There are certain principles in drainage which are almost axiomatic, and failure to comply with them results in the patient's detriment and the surgeon's discomfiture. As an example: The lowest level of a cavity should be the highest point for the insertion of the drainage. In other words, a cul-de-sac drain should always be selected in preference to a drain through the abdominal wound. The only exception is that of placing a small wick as a drain in the abdominal incision as a prompt indicator of hemorrhage following myomectomy.

A double rubber tube, by offering a good deal of resistance in order to establish free drainage, is the best drain for a pus cavity. Double tubing allows of free irrigation with reflex flow, and the drain can be kept open more readily if two tubes are used. In cul-de-sac drainage for cellulitis, take a piece of tubing of the required length and bend it on itself at the middle. Place a linen stitch near the two ends and another near the middle to hold the tubes in apposition. This forms a smooth blunt end for insertion into the cul-de-sac. Then make a good-sized opening on the outer sides of the tubes near the point of flexion. The Fowler position very materially aids pelvic drainage.

In cases in which drainage is indicated following a radical operation for pyosalpinx, I prefer an iodoform gauze drain. The drain should be at least one by one and one-half yards in size. An assistant inserts a long forceps per vaginam and holds it firmly in the posterior cul-de-sac, then cuts down on the point of the forceps, when it is forced through and grasps the end of the gauze. Traction is made until the gauze appears at the vulvar orifice. The remainder of the drain is placed in folds posterior to the uterus. This disposal of the gauze facilitates free drainage and subsequent removal. This method of drainage is many times a life-saving agent, particularly in acute cases in which vitality is at a low ebb and resistance to infection and toxins is almost *nil*.

In cases of pyosalpinx of the chronic type in which there has been no evidence of an acute exacerbation for a long period, and the patient's condition is good, no drainage is needed in case of rupture during the operation. The contents of the tube are usually sterile. However, if the patient's vitality is below par or there is the least suspicion of infectivity, it is good practice to insert the drain. The method is very simple and easily executed, and has not, in my hands, added gravity to the case in a single instance.

It had been my custom to remove the gauze cul-de-sac drain entirely at one sitting after five days. The plan advocated by Wertheimer's assistant appealed to me and

* Read in the Section on Obstetrics and Gynecology of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

I determined to try it. In about fifty consecutive cases I followed his technic, i. e., removal of one-half in five days, one-half of the remainder on the seventh day and the balance on the ninth day. In that series of cases about 90 per cent. developed infection of the abdominal wound, and I abandoned the method.

In my judgment, the infection is caused by a collection of the exudate above the gauze. As the gauze became saturated with exudate, drainage was impeded or entirely stopped, and before the gauze was entirely removed, sufficient backing up of the drainage content caused infection of the abdominal incision. By complete removal at the end of five days this danger is averted. It was further noted that the cases drained much longer when treated by the three-step method, than when the drain was entirely removed on the fifth day.

Since returning to my usual method of removing the gauze on the fifth day, I have had but a single case of abdominal wound infection in about fifty cases. The cavity was much more rapidly obliterated and the infection more quickly subdued.

The administration of a little nitrous oxid gas during the removal of the gauze drain is very advantageous. While I have removed the gauze without an anesthetic, patients have complained so bitterly that it has become my routine practice to induce partial anesthesia.

CONCLUSIONS

Where early positive diagnosis is possible in acute pelvic infections, especially with history of recurrent attacks, early operative interference is good practice.

Evidence of beginning general peritonitis is a positive contra-indication to surgical intervention.

Pelvic cellulitis after localization is best treated by vaginal puncture and drainage.

Palliative treatment of gonorrheal infection during the acute stage, and radical operation when gross pathologic conditions present themselves, is the routine treatment.

Interval operations are advised in the chronic form with acute exacerbations.

In all chronic cases an operation should be done when there is evidence of destruction of the tubes. The sooner done the more likely it is to avert neuroses and psychoses.

The lowest level of a cavity should be the highest point for the insertion of the drainage.

A double rubber tube is the best material in a pus cavity.

Iodoform gauze drain is best where drainage is indicated following a radical operation for pyosalpinx.

Gauze drain should be removed after five days. Three-step removal of gauze causes unnecessary torture and results in infection of the abdominal wound.

ABSTRACT OF DISCUSSION

Dr. Frank T. Andrews, Chicago: I think that perhaps ninety-eight or ninety-nine out of every 100 abdominal wounds that one makes should not be drained at all. Drainage is almost never necessary in the drainage of the abdominal cavity for pus tubes. You put the hand in the cul-de-sac of Douglas, rupture the tube and the pus pours out and soils the field of operation. If you wipe that pus out you do not have to make a toilet of the peritoneum, as we used to speak of it, but you get most of it out, close the incision and the patient gets well. If you drain you go to more or less extra trouble and there is no use in it. Almost all of these pus cases have gonorrhea for their inception; not all. That gonorrhea runs a course in the vulva, shows in the uterus and causes the pus tubes. In time that pus becomes sterile, if it is purely gonococcic pus; or, what is more apt to happen, it becomes a mixed infection, not because the infection is thrown in as a mixed infection, but there are microbes present—the streptococcus, staphylococcus, colon bacillus, the gonococcus—all in that tube, and the gonococcus is the thing that gets out first. If you wait long enough you get sterile pus. I do not like to operate within a very short time—two or three weeks. I prefer to wait. What Dr. Bowers calls an "acute attack" simply means a rupture of the tube and a little extension in the peritoneum. Every pus tube patient gets these ruptures of the sac; that is the soiling of the peritoneum. You never have a patient with a pus tube die of acute peritonitis. Nature throws pus out into the peritoneal cavity, and every time the patient gets well. The only excuse for drainage is the fear that you may have soiled the patient with your own hands.

Dr. Bowers, Dayton, O.: It has been my experience—it may have been the fault of my technic—to see cases in which the pus infection has caused repeated attacks. If you let it absorb you are much more likely to have acute infection than if you put in a drain. There is no use in saying that the pus does not cause infection and that the patients do not die, because I have had this happen and have observed it in other operative cases. Probably in one case in fifty I use the drain. I do not use it promiscuously. No one is more afraid of drainage than I am, but I would rather leave in a drain than let the patient die. The drain does not complicate the case in the least. Those cases will cease draining in four or five days after the withdrawal of the drain. Before the patient gets up the cul-de-sac is closed. Another benefit is that in the cases of excessive adhesion you keep the clean gut out of the soiled field, which lessens new adhesions. I have had less infection of the abdominal wall in cases which are infected and a drain used.

TWO YEARS' EXPERIENCE WITH VACCINES IN PELVIC INFECTIONS *

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In this brief summary on the value of vaccines as an adjunct in the treatment of puerperal and non-puerperal pelvic infections, I shall attempt to describe the class of cases in which the staff of Long Island College Hospital have found vaccines to be of therapeutic use. During our three years' experience, vaccines have been used in almost every case of septic pelvic infection, which has occurred in my several obstetric and gynecologic services.

We have been able, through the courtesy and cooperation of our pathologic department, to make the necessary blood-examinations throughout the entire course of the vaccine treatment, and to study the blood-picture as it appeared before and after each vaccination; so I feel that, while this contribution is but preliminary to a more extended trial, it is our duty to give to the profession at large such data as we have gathered. So many prominent gynecologists speak of vaccine therapy, only to condemn it as useless and unnecessary, that many of the profession, instead of giving it its full clinical value, have come to look on it as a fad of the laboratory experimenter.

It is only by the reports of those of us who have had considerable experience in the use of bacterial vaccines checked by the proper blood-examination before and after each vaccination, that reliable data can be amassed. In my clinics we have applied the injection of bacterial vaccine in every septic case, irrespective of the time at

* Read in the Section on Obstetrics and Gynecology of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

which it was seen, just as we take advantage of the Fowler position in every case of pelvic sepsis.

Our experience convinces us that, while it is a mistake to imagine that we have in bacterial vaccines a panacea for all infections to the exclusion of surgical drainage and general supportive measures, vaccine therapy has a place and serves a distinct purpose as an adjunct to the established forms of treatment. Our experience includes thirty-one patients suffering from streptococcic metritis, twelve of staphylococcic bacteriemia, twenty-eight of streptococcemia, thirty-seven of thrombophlebitis of the pelvic or femoral veins, thirteen of infected pelvic hematocele, sixteen of acute streptococcic salpingitis with peritonitis, fifteen of acute gangrenous appendicitis with peritonitis, forty-eight of colon bacillic and mixed pyelitis, simple and complicated with pregnancy, eleven of pelvic cellulitis due to mild staphylococcic and streptococcic infections, fifteen of pelvic abscess and two of mastitis, besides several others due to pulmonic conditions following from infected foci in the pelvis.

When the human organism attempts to overcome an infection, whether it be puerperal or non-puerperal in its origin, the battle against the bacteria and their toxins is waged by Nature, by the production of certain substances in the serum of the normal blood, known as bactericidal substances, that kill the products of these bacteria. There are also present in the blood, opsonins, which combine with the bacteria themselves and so alter them that the phagocyte can destroy them, and finally, the human organism further protects itself by the elaboration in the blood-stream of certain antitoxins, specific antibodies, which combine with and neutralize the toxins. The streptococcus, staphylococcus and gonococcus are little, if at all, affected in their activity by the bactericidal substances, but are readily opsonized and ingested by the phagocytes; consequently, if we are to carry out the processes of Nature in combating local or general infections, it is necessary to increase the phagocytes, for phagocytosis is one of the cardinal factors in producing an artificial immunity. This can be done by bacterial vaccines, if these vaccines are but used early enough in the septic process. It is when the process is local that most can be expected from vaccine therapy.

In the few cases in which we have failed to produce any degree of artificial phagocytosis by the injection of vaccines, a bacteriemia of virulent type has existed for some time prior to instituting treatment. We have further found that in a large proportion of infections, even when the clinical symptoms have shown severe manifestations, the blood-culture was sterile or that it necessitated repeated blood-cultures to isolate the organism in the blood. While theoretically it is never wise to begin treatment by vaccine injection until the organism producing the infection has been isolated, we have found that were we to depend wholly on the demonstration of the infection in the blood, much time would be lost before the administration of the vaccine. We have therefore depended largely on the culture taken from the cervix, from the interior of the uterus, from the pus or serum evacuated at the time of operation, to determine the nature of the infection.

Autogenous vaccines of a single strain have given us unreliable reactions. This, I think, can be explained by the fact that the coccus is attenuated in its strength and, after it has produced its first reaction, the leukocytes become more or less accustomed to the particular variety of coccus, and are less liable to effect a defense than when a vaccine of polyvalent strain is introduced.

The mixed vaccines of reliable laboratories have given better results than when a single variety was used. This has been shown repeatedly in the blood-picture, when an autogenous vaccine of single strain used in large doses, even up to 500,000,000, has failed to increase the leukocyte-count or diminish the polynuclear percentage, the mixed vaccines of several strains have promptly produced a marked leukocytosis. Even colon bacillus infections, such as the infection of a pelvic hematocele by the colon bacillus, have yielded more promptly to mixed vaccines of polyvalent strains than when a single autogenous germ has been used.

One characteristic which has been noted throughout all of our experience is that, even before any definite effect has been noted on the temperature, the well-being of the patient has seemed to be improved by vaccine injection. The dosage has been a matter of considerable experimentation.

It is almost impossible for the ordinary physician to figure out the opsonic index of the individual patient under his care, but it is very simple for him to determine the necessary dosage by making blood-counts and estimating the polynuclear percentage before and after the injection. It is our custom to examine the blood from four to six hours before vaccination is made; we then begin with comparatively small doses, 25,000,000 to 100,000,000, and eight hours later reexamine the blood. This shows us whether or not the dose given has been sufficient to change the leukocyte-count; if it has not made any change, the injection is repeated on the next day in larger dosage; if, on the other hand, there has been a marked rise in the number of leukocytes, or there has been any change in the polynuclear percentage, we wait for the beginning of the negative phase before repeating the injection, and when it is repeated the dose is doubled or trebled.

The foregoing suggestion has been demonstrated to be of greatest value when infection is due to the streptococcus. In mixed infections or in colon bacillus infections, we have been in the habit of giving an initial dose of from 200,000,000 to 250,000,000, as a hyperbacteriemia, resulting from the patient's incompetence to produce his own antibodies, is less liable to occur when the infecting organisms are of low or of mixed variety.

After these general considerations, it may be of interest to note the special effect of vaccine therapy in each of the several classes of cases that have come under our observation. Thirty-one patients with streptococcic metritis of septic origin, following abortion, labor or intrauterine instrumentation, were treated by injection of bacterial vaccines. In all a marked increase in the leukocytic resistance of the patient was noted immediately after the injection. Three patients died of general peritonitis, ten developed a streptococcemia, which cleared up under the continued use of polyvalent strains of streptococci.

Of the twelve patients with staphylococcic bacteriemia, eleven recovered under the vaccine treatment alone. The one fatal instance is of special interest as it occurred after a normal labor in my hospital service, in which the house surgeon, after waiting an hour and a half for the third stage to terminate, removed the placenta from the interior of the uterus. This removal was done with the gloved hand.

The patient at the time of delivery had a hemoglobin of 39 per cent., a white-cell count of 6,000 and a red-cell count of 2,100,000. Within forty-eight hours her

temperature rose to 105 F. and continued to range between 100 and 106 F. for thirty-two days, making marked and sudden remissions two and three times daily. No local focus was ever demonstrated before death or at the autopsy. Staphylococci in large numbers were isolated from the blood. Autogenous, stock and mixed vaccines and serums were used repeatedly and continuously, without any effect on the leukocytosis. The blood-count steadily decreased and the patient died of a complicating pneumonia.

Of the twenty-eight cases of streptococcemia, six ended fatally. The patients were all very sick and the infection well developed before their admission to the hospital. It was noted in these cases, in which the streptococcic vaccine of an autogenous strain was used, that the leukocytic resistance which was produced was much less positive than when polyvalent stock or mixed vaccines were used.

In the thirty-seven cases of thrombophlebitis of the pelvic and femoral veins in which bacterial vaccines were used, we believe that we have demonstrated that the thrombophlebitic extension is arrested and that the recovery is hastened by the use of vaccine therapy. In all of these cases we have used the mixed vaccines of polyvalent strain, such as suggested by my colleague, Prof. J. M. Van Cott of the Long Island College Hospital. The effect after injection in this class of cases has been almost miraculous. The temperature has promptly dropped after injection, the well-being of the patient improved and the pulse correspondingly strengthened.

Mixed vaccines were again used with noticeable effect in thirteen cases of infected pelvic hematocele following undiagnosed or neglected ectopics. Here again the effect of vaccination on the character of the drainage was promptly noticed. How much vaccination has accomplished in the management of the sixteen cases of acute streptococcic salpingitis in which vaccines were used is not definitely determined, for the patients were treated, not only with vaccines, but with the Fowler posture, starvation, the Murphy drip, etc. We have noted, however, that injection of the mixed vaccines in this series seemed to produce a more prompt and a higher leukocytic resistance than was noted in a corresponding series in which no vaccines were used.

Again, in acute gangrenous appendicitis with peritonitis, fifteen cases of which are included in this report, the vaccines have been useful as an adjunct in the individual defense, but we feel that it was the surgical methods rather than the vaccines that resulted in these recoveries.

Of the forty-eight cases of pyelitis included in this series, fifteen were complicated with pregnancy, two patients aborted spontaneously, one abortion was induced and the remaining patients were treated by posture, the copious ingestion of water, the free use of hexamethylenamin and vaccination with the mixed vaccines of the colon bacillus, the streptococcus and the staphylococcus. All the patients recovered.

The effect of mixed vaccination was very impressive and stands in marked contrast to vaccination in pyelitis, when said vaccination was made with the colon bacillus alone. In all, the temperature improved within twenty-four hours after the first injection and in but six cases was there any rise after the second injection. It is a fact that colon bacillus could be demonstrated in the urine for a considerable period after all general symptoms and local tenderness had subsided.

The eleven patients with pelvic cellulitis who were treated by vaccination in conjunction with the Fowler position, ice and an enema, all recovered, but showed no special changes for good or bad, either in the blood-picture or in the clinical evidence which could be attributed to vaccination. This also holds good in the fifteen cases of pelvic abscess, in all of which the treatment was incision and drainage, in conjunction with vaccine therapy.

In contrast with these last two classes of cases, I want to mention two cases of parenchymatous mastitis. In each, stab-wound discharge had been repeatedly made by the attending physician without avail. In both of these cases injections of mixed streptococcic, staphylococcic and colon bacillic vaccines, were used, which had a most marked effect on the local condition in changing the character of the discharge, diminishing the glandular infiltration as well as reducing the temperature and improving the pulse.

In this summary of our experience we must admit, biased as we were against vaccines, that in thrombophlebitis, in colon bacillic and mixed pyelitis, and as an adjunct to incision in mastitis, vaccines have proved their value beyond question.

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ABSTRACT OF DISCUSSION

DR. F. T. ANDREWS, Chicago: I would like to ask a few questions; for instance, the laboratory work and the work of Dr. Polak's predecessors, on which he founds his own work, have gone to show that it is a dangerous proposition to use vaccine in cases of acute infection. Acute infections are not the kind of cases that Wright indicates, yet Dr. Polak seems not to hesitate to include the acute with the chronic. Another question: How great is the local reaction at the seat of the lesion, not the seat of injection? We have always been taught that the immediate effect is to increase the local inflammation very much. It seems on that account also a reason that we do not dare to do this thing, and if we dare, we all want to do it. He speaks of three deaths from streptococcic infection; were those acute cases or chronic?

DR. JOHN O. POLAK, Brooklyn: The acute cases in the very early stage are favorably affected by vaccine. Where there is a distinct bacteriemia with very little leukocyte defense in the acute stages, I think that vaccines will decrease rather than increase the resistance of the patient. There are very few bacteria to each cubic centimeter of blood withdrawn and sometimes even these are lost. Six examinations were made on one patient with a virulent infection and I did not succeed in getting the bacterium until the last culture. Take the septic abortions, of which we have a large number, and treat them with the usual local procedure and there is immediately the exacerbation of temperature from manipulation. Now if we give a dose of mixed vaccines we do away with the exacerbation and the temperature continues along without the elevation we formerly got from manipulation. I have no fear in using it in acute stages when it is used early enough. Unless we do that, it should be used in small doses. In a case of septic endocarditis with puerperal sepsis with streptococcic infection, the patient came in with a leukocytosis of 4,000; polymorphonuclears, 91 per cent. She was turned over to my service by the medical men and watched throughout her treatment. I began with injections of 10,000, increasing to 25,000 in six-hour injections instead of the heroic dose advocated by so many. I could see after the second injection a marked increase in leukocytic count. I continued the injections until the leukocytic count was very high and the patient showed a corresponding clinical improvement. This was the only case of extreme virulence which showed such marked reactions as to be definitely apparent in the blood-picture. The local reaction has been absolutely negative. I think vaccine adds to the defense after local reaction has been established by Nature. In exudate cases, after everything has quieted down, if we continue the vaccine we get exacerbations. The three streptococcic deaths were in puerperal and miscarriage cases. I get these patients, as a rule, about four or five days after the confinement or miscarriage. These cases are usually injected within the first week.

THE PROBLEM OF STATE CARE OF DRUG AND ALCOHOL HABITUES*

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Whenever a problem concerning the body politic or the stability of society or its well-being presents itself to the general public for solution, that general public has its interest aroused and held by sociologic societies, civic and women's clubs, pulpit speakers, chambers of commerce, newspapers and innumerable other agencies. This combined public interest points the way to the governing civic bodies and helps them to a greater or lesser degree in the matter of arriving at the most satisfactory solution.

Whenever a problem of public hygiene and health whether of white plague or black or red, whether of meningitis or acute infantile paralysis, confronts the minds of the public, that public turns instinctively to the opinions and plans of the medical advising and governing bodies for advice and direction.

In the matter of the first problem, leadership is never lacking; leaders are not slow in collecting in their wake a sufficient following to lend weight and strength to their investigations and conclusions.

In the problem of the second sort, the workers in the field seeking the solution present less diverse types than do the first. It usually rests with men whose minds are prepared by special education, by professional training and the instinct which develops with such training, to seek the basic cause of the difficulty. This located, the medical profession has never been averse to pointing directly to the answer.

We are coming now to a third type of problem, viz., that problem which presents a civic and politico-economic side on the one hand and a distinctly medical side on the other. In the consideration of one of this type, we have the necessary coordination of the lay or purely civic organizations and the medical bodies which are more or less exclusively scientific. Each, strong in its own field, is prone to revolve in the circle of its own ken and in the end the scientific man must invade the field of the civicist; that is, he must trespass on ground without the scope of his own direct work, in order to bring the results of his own investigations to a practical demonstration.

Sometimes in the solution of all three types of problems, thinking, conscientious men are attacked, their investigations are interfered with and belittled, and their conclusions are assailed. This especially applies to those cults and isms which approach any conclusion of the legitimate medical profession as one prompted by selfish interest and worthy of attack. However, these attacks have their virtues, for they constitute a "proving by fire" which makes for more thorough investigation. At any rate, it has a more salutary influence than has the deadly indifference to both investigation and conclusion, which so often is encountered in the consideration of any question which is really stupendous and far-reaching.

While all of this is trite and savors much of platitude, it is the history of the lay, civic and medical consideration of the disease, the neurosis, the habit, the crime—whatever one wishes to call inebriety.

The medical profession has long called this incubus a disease, while the general public has looked on it merely as a vicious habit due to the wilful immorality of the habitué and there remains in the mind of the public the almost ineradicable idea that if this is a disease it is incumbent on the medical profession to cure it. We have pointed the way, but because of the unbelief of much of the public and the limitations of the medical man in the course of his treatment, we have been and are, in the main, unable to answer to the challenge: "Cure."

With the limitations placed on us, and the hopeless indifference of the public both in private and civic capacity, the majority of medical men have tacitly acquiesced in the *laissez-faire* policy which has hemmed this subject about since cognizance has been taken of the futility of the usual police court dealing with the inebriate.

Every writer on this subject prefaces his remarks with a definition of the condition and does what he can to make deductions as to the pathologic states and their needs. The first legislation on the subject was the Inebriates' Act of 1879 in England. In a footnote in the first report of the Inspector for Ireland for 1903-1904 (p. 16) the following comment is made:

"'An habitual drunkard' (or inebriate) is defined under the Act of 1879 as meaning a person who is, by reason of habitual intemperate drinking of intoxicating liquor, *at times* dangerous to himself or herself or to others or incapable of managing himself or herself or his or her affairs."

Dr. Irwin H. Neff in a paper before this section last year read six conclusions which, in his own words, "may be considered as an attempt to establish a clinical entity for inebriety."

I will quote only the first:

"Inebriety is an expression of nervous weakness or nervous instability; used in the simplest sense it could be called a psychoneurosis, many cases showing symptoms which are found in neurasthenic states and allied conditions. Addiction to alcohol is a symptom of an unstable nervous system, and the contrary view, expressed by laity, is not justified by clinical observations or experience."

Inasmuch as the first serious attempt to deal with the question was made in England, a few words on the working of the inebriate law there will not be amiss.

INEBRIETY LEGISLATION IN ENGLAND

After thirty years of more or less effective legislation in England, the Home Secretary desired a report from a committee appointed to investigate workings of the Inebriates' Act. The committee was appointed in 1908, and consisted neither of agitators nor officials concerned in the administration of the acts, but of magistrates, members of Parliament and representatives of the medical profession. During this hearing before the committee, the following facts were brought out:

"During the years between 1865 and 1870 public opinion became impressed by the need of some means for the proper treatment and control of inebriates, the then existing method for dealing with them being simply the resort to fines with the possibility of repeated short sentences of imprisonment. . . . The futility of short sentences of imprisonment was widely recognized alike among prison authorities, visitors to prisons, and magistrates who saw the same drunkards coming habitually before them, in no way improved by the short prison sentence. . . . The feeling culminated in the appointment of a select committee in 1872 and the subsequent presentation to Parliament of a bill designed to meet obvious requirements. The report of that select committee was emphatic. Some of its suggestions have not yet been carried out, although their truth and efficacy has become more and more obvious." (Minutes of Evidence Relating to Inebriate.)

* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

The act of 1879, as presented to Parliament, consisted of two parts; one providing for the voluntary commitment and a second providing for the compulsory commitment of inebriates. But the people were not prepared for such a far-reaching measure, and probably shied at anything partaking of the nature of temperance legislation as quickly then as they do now, and the act was shorn of its compulsory phase.

In 1892, active interest in the subject was again displayed and a departmental committee was again appointed. Their recommendations led to the passage of the act of 1898 which permitted the incarceration of inebriates who came within the purview of the law, because of crimes in which drink was a contributing cause, and those who had been convicted of drunkenness three times within a year. Under the act of 1879, during thirty years, thirty-two private licensed or certified institutions were established, an average of twenty have been in constant operation, and 7,500 patients have entered voluntarily. These voluntary entrances are really entrances under the effect of much pressure on the part of relatives and friends.

During the five years ending in 1908, Lady Henry Somerset's Retreat housed about 500 inmates and only twenty of these came absolutely of their own accord.

Under the act of 1898, fourteen institutions were in operation, handling a sum total of 2,770 patients. The number of reformable persons sent to these institutions is much less than was anticipated. A considerable number of persons committed from police courts were violent, unmanageable persons, who required stronger measures than it was desirable to enforce in certified reformatories. During the first twenty-one months of the act's practical existence, eleven inmates proved themselves too uncontrollable to be dealt with in certified reformatories, and had to be discharged. This led to the establishment of state reformatories, in which were received only the refractory cases.

The first home established provided no special occupation for men, and provided no means of segregation. The women were provided with a certain amount of outside work and were to some degree segregated.

The principal difficulties confronting those who were seeking the solution of the problem in England were and are:

1. Popular indifference and unbelief.

2. Establishment of homes or retreats by inadequately endowed charitable organizations.

3. Absence of police control in the retreats established. Refractory patients were perforce discharged if they were only bad enough, and a premium was thus placed on misbehavior.

4. Lack of trained attendants in the retreats. This, in the words of Lady Henry Somerset, "constitutes one of the greatest secrets of the weakness of the plan."

5. Lack of classification of cases. Many people are classed as inebriates who are in reality habitual criminals with inebriety added.

6. Lack of practical knowledge as to the time necessary for care of curable patients.

7. Lack of a definite uniform system of identification and parole.

There is an old saying about experience being an unfailing teacher and some one has added to that: "But not the other fellow's experience." "The other fellow's experience" has been a long time in making any impression on the voting and tax-paying public in America. On the few enthusiastic souls who have been laboring in the field, both the medical men, officers and sociologists, it has left its imprint, and they have struggled courageously if somewhat vainly to pass the message on to the public.

The campaign of education which they have instituted has resulted in a few states in well or badly balanced efforts in the direction of care for cure and control of the inebriate user of alcoholic liquors and narcotics.

But this is a representative form of government and the American public stands somewhat aghast at anything which savors of paternalism. Some one has said: "This is a government of the people, for the people, *and by the representatives* of the people." Unfortunately, representatives of the people stand aghast at any measure which requires missionary work to make it acceptable, and especially when it centers or revolves about anything which savors of that politically tabooed word "temperance." Again, granting that legislators are willing to enact legislation along this line, they have before them the question of patronage; and patronage has ever been a potent word to the politician.

In the establishment of some at least of these institutions in the past: (1) politics have not been eliminated; (2) attendants have not been chosen with close attention to their absolute fitness; (3) means have not been placed at the disposal of the staff, if trained, to enable that staff to accomplish the best results; (4) the type of commitment has been wrong; (5) the time of commitment has been too short; (6) opportunity for proper occupation has been lacking; (7) the governing boards have not been chosen with a view to their fitness in the direction of such institutions.

In several states, laws have been passed permitting the incarceration of inebriates in hospitals for the insane, for cure and control. At the annual meeting of the California State Medical Society, this year, this policy was defended by a medical man who had been engaged in the work in Pennsylvania. He considered that the results were very satisfactory. In connection with this, permit me to quote Dr. Frank Woodbury, secretary of Committee on Lunacy of the Commonwealth of Pennsylvania:

> "These patients, strictly speaking, are not insane, and do not come under the supervision of the Committee on Lunacy, and are really intruders in the hospitals for the insane. Not being insane, they constitute a very troublesome class, as they are very discontented and are constantly exciting the other patients to insubordination and are plotting their escape from the institution." (Personal communication.)

Dr. George Donahue, superintendent of State Hospital for Inebriates at Knoxville, Iowa, says:

> "While I can conceive that the commitment of the inebriate to the state hospitals for the insane is not the most desirable plan, it is the one that has usually been adopted by the older states as a beginning of an inebriate institution. After they are cared for at the state hospital for the insane for some time, a separate hospital is soon established for them." (Personal communication.)

During the months from September, 1910, to March, 1911, I sent out approximately 500 letters of inquiry concerning:

1. The need of a state institution for the care of inebriates, with or without pay beds for those able to pay.

2. The wisdom of a state institution as above, plus the licensing of private institutions for the care of patients for cure and care of patients for control.

Approximately 300 replies were received. Out of all of these writers there were *five* who denied the wisdom

of such a policy, stating that the law of some states permitting the incarceration of inebriates in hospitals for the insane to be quite sufficient.

One medical man who had had ten years' experience in state farm work wrote:

"To put the case in a nutshell, state institutions have been disappointing for the reason that the majority of the patients sent to state institutions do not have a sincere desire to be cured. I believe that every state should have a good moderate-price institution where inebriates could be given proper care at moderate cost, or at the cost of the state if necessary, but I have no faith in spending money trying to cure people who do not care to be cured."

Thirty-one agreed as to the need of a state institution but emphasized the need of licensing private institutions for the care of those able to pay, for two reasons:

1. Desires of patients to go to private rather than public institutions.

2. Large amount of capital invested at present in thoroughly equipped private institutions.

Fifteen condemned the licensing of private institutions under state supervision as always being inefficient and characterized by lax supervision.

Ten writers approved state institutions for legal commitments of alcoholic offenders and both types of institutions for voluntary commitments, but considered the delegation of any police power to a private institution to be injudicious and impractical.

Twenty-one approved of some pay beds in state institutions for voluntary commitments, and enforced payments of costs of maintenance by those under commitment following arrest, if such individuals were possessed of sufficient means to pay.

The remaining replies assented to state control plan without comments. The analysis of these replies, sent from representative men and organizations all over this country and from England, places practically all of them on the endorsement side of state institutions for care and control.

The licensing of private institutions is sparingly endorsed, the quality of the supervision is questioned, the delegation of police power is condemned, and a serious question is raised as to the ability of such private institutions to provide occupations for inmates. This makes a limited endorsement of the voluntary curable patients only, for private institutions under state license. Private institutions as places of mere detention are out of the question.

If then it be admitted that a state institution is necessary, there remain two things to consider:

1. What has been accomplished?

2. How may the results be increased?

The limits of this paper permits considering the methods and results in but a few institutions and of these we will choose the following:

1. Foxborough State Hospital (Massachusetts).

During the time from April 1, 1908, to Oct. 1, 1910, there were 777 new admissions; of these, 324 were counted favorable, i. e., cases of patients likely to be cured or to receive marked benefit from treatment. The unfavorable numbered 453.

Abstinent since discharge, 28 per cent.

Much improved, earning livelihood, 21 per cent.

Unimproved, 36 per cent.

Of sixty-two subjects of morphin addiction discharged, 18 per cent. have remained abstinent. Many of the cases were not at all desirable from a hospital point of view.

Foxborough has asked for, and lately received, something like 1,200 acres of ground for use in connection with its institutions and they are expanding both in the number of occupations possible to follow and in the amount of work done along any one occupational line. They are, however, still struggling with the problem of voluntary commitments terminable at will, and with the problem of handling the mildly insane in the same institution.[1]

2. Knoxville, Ia.

The authorities at Knoxville, Ia., sent out 774 letters of inquiry concerning inmates who had been committed and released during the previous two years and received 365 replies. Of the individuals concerned in these replies, thirty-eight had never returned home, 214 had not relapsed, fifty-four greatly improved, twenty-nine relapsed after a year or two, thirty began drinking at once and eight were reported worse than before commitment.

Of the entire number treated, 214 known to be cured plus 105 who are making regular reports, but concerning whom answers to the letters were not returned, gives us 41½ per cent. cured and living up to their parole.[2]

The present needs of the institution are greater opportunity for industrial occupation, shops of various types where, after an inmate had recovered sufficiently to do a reasonable day's work and had become profitable enough to cover some of his own expenses, a wage allotment could be made to him, to go to his family or to be reserved for him on his parole.

One of their chief difficulties is the restraint of their patients and this is emphasized by their experience in failing to control them while they made use of the insane hospital plan, prior to adopting this present one.

A personal communication from a member of the Board of Control of State Institutions of Iowa says:

"While the institution has done a great deal of good, it has only been partially successful. If run along the lines that we have been using, we do not think it would be advisable for your state to start such an institution. This institution should be conducted as a hospital and the supervision and control should be similar to that in the state reformatory or penitentiary. We intend to do that with our institution in the near future."

3. Duxhurst, England.

This institution, a private licensed one founded by Lady Henry Somerset and superintended by her, emphasizes occupation, relaxation and *religious influence* in the care and control of these cases. Refractory patients are sent to state farms.

In a personal communication, in March this year, she says:

"We take no patients under one year. Our medical man reckons that, taking the sixteen years over and calculating cures only at two years, we have about 60 per cent. of cures."

Her testimony given before the investigating committee emphasized the need of *intelligent* supervision of licensed institutions, trained staffs and more complete segregation of cases.

New York City, enabled by a special act of the legislature, is now perfecting and putting into force what will probably prove to be the most complete example of meeting the problem that has yet been devised. It consists of a proper system of identification and parole, sentences for repeaters graduated from a minimum sentence of six months to three years at the State Hospital, under parole regulations and on the undetermined sentence plan, sending repeating incurables to the state farm for three years and recommitting them on release as necessary.

This serves to emphasize what this body already knows about this subject, and if one will turn to the reports of state boards or of the National Conference of Charities and Corrections, one will see it all stated clearly and explicitly. But, unfortunately for the prog-

1. Annual Report, Foxborough, 1911.
2. Supt. Second Biannual Rep., Knoxville, Iowa, 1908.

ress of the plan, the general public does not read them, and up to this time the reports have not found an audience through the columns of the public press.

If Neff, Crothers, Homer Folks, Bailley Burritt and many others equally well informed could gain the public ear, there would not be so much evasion in the handling of a subject which the whole world is forced to admit has been dodged rather than met.

Rosanoff's statistics showing 28 per cent. of cases of insanity in New York, and 30.6 per cent. of the cases in Massachusetts to be due to alcohol, together with the investigation of others showing a percentage greater than either of these in the causation of imbecility and epilepsy, must of necessity bring to the minds of all who cease their running long enough to read, the necessity of legal intervention in the matter of control of the incurable and in the direction of the cure of the curable alcoholic.

Statistics concerning alcoholism, imbecility, epilepsy, idiocy, crime and poverty are always incomplete and misleading. But if one will take the time to go through one institution for the cure of defectives; if one will investigate as far as possible, and in the incomplete way that such things must be investigated, the life history of one small group of exceptional children, one can draw conclusions that can be made interesting and instructive to the public. If one will consult with active members of any board of charities and will direct one's attention merely to the cost to charity of the mighty problem of alcohol, some further facts of the value to the public can be elicited.

If one will direct another line of inquiry to any board of charities in any given place, and exclude all doubtful cases, one will be appalled at the number of homes disordered and disorganized by the same agency.

If, in still another direction, one will turn one's attention and estimate the tremendous cost in jail and police court expense, to say nothing of the cost of maintaining such patients in public hospitals and almshouses, where again they constitute an exceedingly trying and disturbing element, one can easily gather data to show the tax-paying and tax-voting public the economic value of institutions for cure of curable and control of incurable drug and alcohol habitués.

Inebriety absolutely surrounds the questions of the spread of tuberculosis and the red plague, and if the medical profession will include it in its campaign of education on the latter subjects and individually and collectively seek to induce the general public and the mouthpieces of the general public to become interested in this, it will make tremendously not only for the saving of much now ill-spent public money but also, what is of infinitely more importance, it will mark an epoch in the conservation of human values.

CHRONIC ALCOHOLISM

WHAT CAN AND WHAT CANNOT BE ACCOMPLISHED BY TREATMENT *

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Until the last quarter of a century, alcoholism was almost universally regarded as a mere moral perversion, a bad habit entered into and continued because of moral degeneracy. Numerous efforts were made to reclaim and reform the drunkard. Almost all of these consisted in an appeal to the moral and emotional nature of drinking men and many were thus influenced to abandon the use of alcohol, but a large majority were unreached by these efforts. In more recent years, the wretched condition of these men has appealed strongly to scientific men who were students of human nature as well as of abstract science, and the causes or influences which lead such men to enter on and continue the use of alcoholic beverages has been studied from every view-point. These studies have fully established the fact that only in a very small percentage of cases is alcoholism a mere moral perversion, but that it is in the truest sense a disease, a disease having a well-defined and demonstrable pathology. Since the disease theory of chronic alcoholism has been accepted, the questions have naturally arisen: What can be done by treatment for this disease? Is it curable? To this last question both an affirmative and a negative answer can be made and each will be correct when applied to a certain class of cases.

Chronic alcoholism is not only a disease itself, but in many instances it springs from other diseases and it is certain that other diseases grow out of it. These diseases may be either physical, mental or moral. To cure any disease, the cause must be removed. In some cases of alcoholism this can be done by treatment, in others it cannot; hence the question naturally arises: What class of cases is curable and what is not? In endeavoring to answer this question, it is necessary to consider the type of the addiction as well as the influences which led to its formation. For the purpose of study, as well as for treatment, it is best to divide alcoholic subjects into two general classes, regular drinkers and periodical drinkers.

There is wide difference between the influences which lead the periodic alcoholic to go on a spree and those which prompt the regular drinker to continue the use of his beverage.

REGULAR DRINKERS

Probably 80 per cent. of all persons who habitually drink alcoholic beverages form the habit inadvertently, unintentionally and without any definite purpose in view. Among them may be found persons of the highest aims who, primarily, had sound bodies and minds and good habits, but who began the use of alcoholic beverages in a social way or with the erroneous idea that the effects of the alcohol would protect them from some prevalent disease, such as malaria, etc. Such persons continue the use of alcoholic drinks without mature thought as to their effects on them and certainly without any purpose to go to excess or to dissipate in any way; but no matter how begun, the frequent use of even a small quantity of alcohol creates a demand for increasing quantities, and this grows by almost imperceptible degrees until there is a daily consumption of considerable quantities of some alcoholic drink.

For a time the effects of this beverage seem to improve the health, to impart greater mental and physical vigor and generally to promote the well-being of the subject, but these benefits are more apparent than real. In fact, they are not real at all. The effects of this agent having merely built up a state of apparent hypernutrition by increasing fatty metabolism and decreasing waste. In this manner an unwholesome bodily state is brought about in which the demand for the effects of alcohol is increasingly felt, and because of which the victim is only comfortable when under the influence of alcohol. Almost imperceptibly the demand for stimulants grows, the victim becomes more and more depend-

* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

ent on them and larger and larger quantities are required to meet this demand.

The daily consumption of these considerable quantities of alcohol necessarily brings about such changes in the system as to create an imperative demand for their continuation.

After reaching this stage, the victim feels that he cannot begin his day's work without his morning drink; there is a degree of lassitude, a lack of vigor which he seems totally unable to throw off without the aid of his stimulant. As the disorders growing out of the use of alcohol progress, one drink is not sufficient to give the desired support, then two, three or more are taken in close succession and this bracing process is continued throughout the day, from day to day and from week to week.

The effects of this prolonged and free use of alcohol bring serious impairment of the digestive organs, the appetite is variable or absent altogether unless freshly stimulated by an extra drink and if, at this or any subsequent stage, the victim makes an effort to discontinue drinking, such a state of nervousness arises as to drive him to resume the stimulant. The entire system has by this time become so saturated with toxic matter that a condition of intolerable nervousness arises whenever the system is allowed to get from under the now sedative effects of alcohol, and no matter how acutely conscious the victim may have become of his slavery to alcohol or how heroically he may struggle to throw off the yoke, he finds himself unable to do so by his own efforts. The prolonged free use of alcohol brings on such disorders of the system as to lead the best of men, when in its grasp, to continue to seek relief from these disorders by increasing the quantity of alcohol consumed. Whether that course is imperatively necessary or not, it appeals to them as being the one readily available remedy, the panacea for every ill, and it is so used.

A majority of habitual users of alcohol in this country belong to this class, and many of them would gladly quit drinking if they could ever get the poison out of their systems and reach a state in which they could live in comfort without it, but they seem never to be able to do so. They never become entirely sober and their systems are never normally free from the products of tissue waste; on the contrary, they are habitually in an extremely toxic condition and are comfortable only when the paralyzing effects of alcohol blunts their sensibilities to the irritating effects of this poison.

In habitués of this class, the addiction has a purely physical basis which is the product of alcohol alone. This consists of both structural lesions and functional derangements, but the structural lesions have little influence toward impelling the victim to continue the use of alcoholic drinks. The functional derangements are the only disorders growing out of the use of alcohol of which he is conscious, but these throw him into extreme distress when he attempts to go without the aid alcohol gives him. These functional derangements consist mainly of a chronic catarrh of the stomach, accompanied by an intensely toxic condition of the system, but as these yield readily to proper treatment, alcoholic patients of this class are curable. It is folly to talk to a man in such condition as this about reforming his life and stopping the use of stimulants by his own efforts. The forces which impel him to continue the use of alcohol are stronger than any will-power he is able to exert. In order to put him in condition so that his own will, his normal impulses may control him, his system must be thoroughly renovated and the physical demand for the effects of alcohol removed, then his moral nature can assert itself and then, and then only, can he control himself by the exercise of his will-power.

In the second class of regular drinkers I would place a small percentage of persons who were born with, or who from disease in early life acquired, a defective physique and an unbalanced nervous system, persons who, because of such defects have never been normal either in nervous system or physical organization. When such persons, in seeking something to overcome their habitual discomfort, experience the effects of alcohol they readily fall victims to its seductive influences. For a time it seems to fill the vacant place and to be the one thing lacking in their lives; it overcomes that discordant nervous condition which they so much dread, and they feel that they have found a panacea for all their ills, but this relief is of short duration. The demand for the effects of alcohol grows very rapidly in such persons and its continued use brings on the same pathologic changes that it does in others. The system soon becomes extremely toxic. This irritating matter greatly aggravates their former nervousness, so that the two conditions together now make such an imperative demand for the effects of alcohol that the victim cannot resist it and he keeps himself constantly saturated with alcohol; in fact, after reaching this stage, he must do so to enjoy the least degree of comfort.

But little can be expected from treatment in this class of cases unless it is found that the original discordant nervous element can also be removed by treatment. When it is found that these causative conditions are such as to be amenable to treatment, and the treatment for the addiction embraces not only such treatment as would be necessary to give relief in an ordinary case, but also such other measures as may be required to restore the primarily unbalanced nervous system to a normal condition, much benefit may be derived from treatment even in these unpromising cases, provided a reasonable degree of moral fiber was originally present.

In a third class I would place another, relatively small proportion of regular drinkers. To this class belong those who drink as a pure dissipation, persons who are deficient in moral fiber, lacking in purpose, supremely selfish, willing to gratify the desires of the present moment at any cost to themselves or others; those who are simply drifting through the world without rudder, compass or objective port.

These defective traits of character may be due either to inherited tendencies or to early environment. Persons of this class drink because they prefer to do so, and they would return to the use of alcoholic drinks even if some one took them up and gave their system a thorough renovating and removed all physical necessity for the effects of such drinks. In cases of this class, more than human agency would be necessary to effect a cure. Not only would it be necessary to renovate their bodies and put them in normal physical condition, but it would be necessary to effect a most radical change in their moral nature, a complete transformation of their purposes in life, and nothing short of the grace of God is sufficient for such a work. Human agency will not avail.

Fortunately, only a small proportion of the regular drinkers belong to either of the two classes last mentioned; the great majority are of the class first described in this paper. They are men of good families, of excellent traits of character, of high aims, chivalrous, generous to a fault, truthful and honest; in fact, most of them are men with whom no fault can be found, except this one weakness, and that due to the fact that they

have fallen into the clutches of this monster. Victims of this class continue to drink only because their will-power and self-control and their ability to estimate correctly their own condition, have been so undermined by the effects of alcohol that they cannot extricate themselves from its clutches, they cannot of themselves retrace their steps. On arising in the morning, they find themselves totally unable to begin their day's work without the bracing effects of alcohol, and because of the urgency of this physical demand they continue to seek what relief they can get from it from day to day. When such men as these are freed from the domination of alcohol, when the physical demand for it is overcome and they are put in a normal condition, they almost invariably remain permanently free from it. Failure to benefit permanently such men as are described in the second and third divisions above mentioned should not be allowed to discourage us or to render us less enthusiastic in our efforts to rescue the more numerous and really noble army of enslaved ones.

PERIODICAL ALCOHOLISM

There is a wide difference between the influences which lead to periodic alcoholic sprees and those which lead the regular drinker to continue the use of his beverage. Periodic alcoholism may spring from a variety of causes, but these may be studied to advantage under four types which may be enumerated as follows: (1) dipsomania, real or symptomatic; (2) moral cowardice; (3) bad environment, with lack of stability of character; and (4) bad environment, with an ever-present but usually successfully resisted appetite for liquors.

Dipsomania

Dipsomania is defined to be "an uncontrollable desire for strong drink," but this term should be restricted to those cases in which this desire or impulse springs from a real mental disorder, a true mania. It should not be applied to cases in which the desire for drink only becomes uncontrollable when it is excited or intensified by some general physical derangement, or to cases in which the desire is continuous. A better definition would be: Periodic insanity taking the form of an uncontrollable desire for strong drink.

Real dipsomania is very rare, but that it does exist cannot be denied. Most writers leave the impression that such attacks are due entirely to some obscure structural brain lesion or inherited mental defect. It is doubtless true that there are persons in whom a real mania of this type occurs because of an inherited mental bias or perverted nervous organization, independently of the general physical condition, but, in my judgment, such cases are extremely rare. In a large majority of cases which are thus classified, the attack occurs only when excited by an added general systemic derangement, such as an acute intestinal toxemia. The irritating effect of this toxic matter serves as an exciting cause of an outbreak. In many instances these attacks may be warded off or prevented altogether by keeping the system free from toxic matter.

Where outbreaks of this kind occur solely as the result of an inherited mental defect, treatment cannot be expected to be of material benefit; but in cases in which such attacks occur only when an exciting cause, such as an acute toxemia, contributes its influence, then treatment can be a material benefit, provided it embraces such instructions in the manner of living as to enable the victim to avoid the occurrence of these toxic states.

Moral Cowardice

Another and probably the most hopeless class of periodic drinkers are those who drink as an expression of moral cowardice. These are men who have no particular craving or appetite for liquors who will say at almost any time that they do not care for the taste or primary effects of alcoholic drinks, but who have learned from experience that alcohol will blunt their sensibilities and bring them surcease from cares and worries which they have not the manhood and moral courage to take up and bear, and from time to time they seek forgetfulness in the effects of alcohol. A man of this class will quarrel with his wife or a friend and go off and get drunk for spite, or he may have some adverse business experience which to others would be trivial, but he, not having the moral courage to face it, runs from it and seeks oblivion in the effects of alcohol.

Little if any good can come from treatment in patients of this class. Therapeutic measures cannot remove from their lives these defective traits of character or impart to them that degree of moral courage which is needed to fit them to fight the battles of life in the open and resist the adverse currents which drift them from a safe and sober mooring.

Instability of Character with Bad Environment

In another class of periodic drinkers the sprees are due to bad environment coupled with instability of character. These are the social drinkers who lose control of themselves as soon as one drink is taken. Many of these are men of estimable qualities, amiable, chivalrous, good-hearted, kind, and in every way lovable men, but they are deficient in self-control, fixed purposes and positive traits of character. They are good-natured fellows who drift with the current and allow others to dictate their course. These men, when away from their drinking associates and out of temptation, remain entirely sober and would not think of going alone and deliberately beginning to drink; they have no craving or appetite for liquor which they are not fully able to control, but they are negative characters and when thrown with drinking associates they do as others do. They are of the type of social drinkers who lose control of themselves as soon as they are slightly under the influence of liquor. When once started, such men continue to drink until some one takes control of them and assists them to get out of the adverse currents. Then a period of entire sobriety follows, only to end in another spree when they again come under these unwholesome influences.

Treatment in such cases can be successful only when followed by an entire change of environment. Not only must the old associates be given up, but the one seeking to reform his life must be thrown with sober and moral people whose positive influence for good over him will be sufficient to enable him to stand firmly in his new position, notwithstanding his defective traits of character.

Bad Environment with an Ever-Present but Resisted Appetite

Another type of periodic drinkers are those who have an inherited or acquired thirst or craving for liquor which is ever present with them, but who, from strong convictions, contend against this weakness with a courage that in many cases is really heroic, and, under favorable circumstances, they succeed in controlling themselves but, when thrown with drinking associates,

or when brought under other strong temptation, they find themselves unable to resist both the ever-present thirst and the temptation. Under these circumstances they begin to drink, and as soon as one drink is taken their resisting power is gone, and they throw themselves into the spree with a vigor and abandon which is not known to the more timid or less resolute. They continue to drink until the stomach rebels and will no longer retain the liquor; then they go through a period of extreme distress and remorse, and finally get back on their feet.

Periodical drinkers of this type are more amenable to treatment than any other form of periodical drinkers, because the craving, the thirst against which they contend, can be overcome—in fact, entirely destroyed. In addition to this, their attitude toward liquor can be so changed as to render its taste, smell and effects repulsive to them. When men of this type are given this much aid, they find themselves quite able to contend successfully against the influence of drinking associates and to resist other currents of influence which, when associated with their former craving, would have been sufficient to cause them to fall.

PRINCIPLES OF TREATMENT

Before undertaking to treat any disease, we should endeavor to ascertain the nature of the condition to be met; whether such a condition has a real, structural pathology or is only functional derangement, and whether it is a physical or a mental disorder. That the prolonged use of alcoholic drinks does cause serious structural lesions of the brain, liver, stomach and other organs cannot be denied, but such lesions are not the only or even the principal reason for the continuation of the habit. In some cases, as we have seen in the preceding, the use of liquors is continued from preference, or because of some mental or moral defect, but in the great majority of cases alcoholic drinks are continued because of a strong demand in the system for their effects. The habit has a real physical basis. This demand for the effects of alcohol is due mainly to the toxic condition of the system. Alcohol blunts the sensibilities of the nervous system and retards the excretion of the products of waste. The life of the human organism is a continuous process of waste and repair. When the excretion of this waste is retarded, even to a slight degree, day by day, the system finally becomes so saturated with poisonous matter as to cause serious functional derangement of every organ in the body. One in this condition finds it necessary to keep the nervous system constantly blunted with the effects of alcohol or other narcotic in order to obtain a reasonable degree of comfort. While it is true that alcohol has caused these disorders, still its effects relieve the acute distress springing from them more promptly and in a manner more acceptable to the sufferer than anything else with which he is familiar, therefore he continues to seek what comfort he can get by taking more alcohol, and thereby burns the taper at both ends.

In endeavoring to bring about such a change in this condition as to render the further use of alcohol unnecessary, the first and most important step is thoroughly to cleanse the system from the products of waste which the effects of alcohol have forced it to retain. In doing this the bowels, kidneys and skin should all be made to do their full share; in fact, for a time these should be made to do many times their ordinary duty.

Just in proportion as the excess of toxic matter is eliminated will the nervous system become quiet and the urgent demand for the effects of alcohol disappear. As a rule, in the course of three or four days the system may be so cleansed of toxic matter as to permit the withdrawal of alcohol without risk or discomfort to the patient. I do not consider it safe, or at all advisable, to withdraw alcoholic liquors abruptly from one who has been using them in large quantities without first preparing the system for such withdrawal. After the system is properly prepared for the withdrawal, it may be made with safety and without discomfort, but I cannot agree with the arbitrary rule of cutting off the alcohol as soon as the patient is taken in hand.

Up to this point, the treatment in the several classes of alcoholic cases is practically the same, as all of them require elimination of the toxic matter and the withdrawal of alcohol, but from this point on, the several classes will require radically different lines of treatment. The particular nature of the treatment required to complete the cure will depend on the cause, or set of causes, which originally led to the formation of the habit, as well as those which have had an influence in its continuation. If these were purely mental, then treatment calculated to overcome a mental disorder should be given; if they were moral or social, then these influences should be looked into and every effort made to direct the patient's future life so as to protect him from these damaging influences and prevent a return to his old haunts and habits.

If the patient belongs to the more promising class, the regular drinkers in whom the habit was continued because of the usual mental bias favorable to the use of alcohol, and because of the deranged physical condition resulting from its effects, then the succeeding step in the treatment should be to neutralize or eliminate the remnant of alcohol remaining in the blood, to overcome any appetite which may remain for it, and to supplant the mental bias favorable to alcohol with a dislike or complete disgust both for its taste and effect. The means available for these purposes are so numerous and their application so varied that they do not admit of detailed discussion in an article of this kind. In addition to the well-known therapeutic agents—static and other forms of electricity, vapor, shower, neutral or electric baths — suggestion, and in some cases even hypnotic suggestion, discipline and physical training can be used to advantage.

While these corrective measures are being employed, active therapeutic measures calculated to overcome the catarrhal condition of the stomach should also be used. This condition is the remaining disorder which would exert the greatest influence toward a return to the old habit, because of its effects in impairing digestion.

Fortunately, catarrh of the stomach yields readily to treatment in these cases after alcohol has been discontinued, but active treatment for this disorder is essential, and it should be continued until all trace of it has disappeared and the patient's digestion is perfect. He should be able to eat and enjoy three good meals a day. Patients of this class need the strength derived from a hearty breakfast to take the place of the support they formerly received from alcoholic stimulants. No part of the treatment is of greater importance than this, since, if it is not successfully carried out, the patient will not be so secure from relapse as he should be. Impaired digestion, with its attendant lack of strength, operates as an ever-present influence suggesting the need of some stimulant, some outside supportive, and this amounts to an autosuggestion to take a drink. This is a dangerous condition for the patient to be left in.

The indications to be met in some cases of alcoholism are simple, and the treatment can be easily carried out, while in others they are so complicated that the resources of the best-equipped institution as well as the skill of the most resourceful physician will be taxed to the uttermost; but with the aid afforded by a well-equipped institution a competent physician can effect as large a percentage of cures in cases of chronic alcoholism as can be effected in any other serious ailment. The most skilful physician cannot treat patients successfully at their homes. The disadvantage due to their home surroundings and to lack of complete control over the patient will defeat his best efforts. Even a general hospital does not assure the physician such control and protection as this class of patients require.

I do not feel that I should close this paper without a warning against any institution or physician offering to send a home treatment for alcoholics or drug victims. Such an undertaking is worse than folly, and when a proposition of that kind does not spring from entire ignorance of the conditions to be met, it is prompted by criminal avarice. Especially fraudulent is the offer to send a remedy that can be administered in coffee, etc., without the patient's knowledge, and thus overcome the desire for liquor and break up the habit.

THE THREE-DAY LIQUOR CURE

The time required for the successful treatment of a case of chronic alcoholism varies from two weeks to two months. Those who promise to effect a cure in much shorter time than that, promise more than they can perform. A "three-day liquor cure" is being advertised extensively throughout the country, and a number of institutes have recently been opened for the employment of this method. This treatment consists of the administration of a dose of cathartic pills and after that the hourly administration of an emetic in liquid form, the emetic consisting of either lobelia or ipecac or of the two combined. An hour and a half from the time of giving the first dose of the emetic, the patient is required to take a drink of whatever alcoholic liquor he has been using and this is repeated every half hour until four drinks have been taken. All of these are promptly given over to the slop-jar with interest. The liquid emetic is kept up every hour for the first day, but only the four drinks are offered to the patient. If he asks for more liquor, it is given and this is followed by an extra large dose of the emetic, sufficient to insure immediate and prolonged vomiting. The second and third days' treatments are the same, only the emetic is given at less frequent intervals, and only two drinks are required to be given on the second day. If the patient asks for more on that or on the third day, it is given and this is followed by a double dose of the emetic.

The extreme nausea and vomiting from this course, if the patient can be made to take it, is supposed to disgust him so completely with whisky that he will not take it again. By the time he has been kept in this condition for three days, he is so disgusted with whisky, himself and everything else that an effort to swallow anything will cause him to vomit. It is true that he does not want whisky, because he is not in condition to take and retain anything, but he is no more cured of the whisky habit than he would have been had he drank until his stomach rebelled and had vomited three days and nights from the effects of whisky. His system is still in a badly disordered condition; he is extremely nervous and cannot sleep, is totally unfit for business and if he recovers it is because of the restorative forces of the system and not because of any curative effect the treatment had on him. Such sleight-of-hand fake methods cannot be too strongly condemned. There is no curative value in them and the public should be taught to avoid them.

In undertaking the treatment of alcoholic patients, the physician should take a comprehensive view of the patient and his surroundings and endeavor to estimate correctly every influence which has in any way contributed to his enslavement, and to direct the life of the patient thereafter so as to remove every one of the hurtful influences, as far as is possible. The physical man must be completely renovated and every function of the body restored to normal activity. The mental bias favorable to the use of alcoholic liquors must be eradicated and in its stead a positive aversion to alcohol must be established. The patient is to be given a new chance in life by being put on his feet with a clear head, in full control of all his faculties and free from the dominating influence of alcohol. The consummation of such a work is certainly worthy of the best efforts of any man.

958 South Fourth Street.

ABSTRACT OF DISCUSSION

ON PAPERS OF DRS. CROSBY AND PETTEY

DR. S. GROVER BURNETT, Kansas City, Mo.: In 133 years, China and Eastern Asia paid to the Eastern India Importation Opium Company $2,100,000,000 profits, or over $1,600,000 a year. They used annually 42,000 tons of opium; of the 430,000,000 of people, 25,000,000 were addicted to opium, one in four of the entire population, 50 per cent. of the men in the cities, and 20 per cent. of the women. Not one mother in 1,000 can read or write her own language. This opium addiction has been going on 600 years, until they have practically obliterated their educational memory centers, losing all desire for choice recreations such as are enjoyed by our civilization. I should have said that they have twenty-six opium addicts to the square mile. I have forgotten the figures that America has in her consumption of opium and cocain, but it is more than fifteen times what we should be using. We can simply look back and see China's acquired psychology, her mental obliteration, and what we are coming to in this country if we do not put a stop to it. Dr. Crosby has given us something to think about, and a method of doing it.

DR. A. W. HOISHOLT, Stockton, Cal.: I am fully in accord with Dr. Crosby and his paper, and the part particularly that refers to the fact that the asylum is not the place for the care of the alcoholics. Our chairman from Minnesota states that his state cares for them on a farm for inebriates. I think that is the ideal way. They should be cared for in institutions gotten up especially for them. I have had some twenty years' experience in a hospital for the insane and I can say that all the hospital has done for them is to keep them from liquor, partially. It hasn't even done that thoroughly, because the Stockton Asylum is inside of the city limits. The city has two hundred saloons, and you can imagine what happens when a patient is given parole. It happens frequently, and the situation is far from satisfactory. When I visited Germany some years ago, at Dahldorf, near Berlin, they at that time received alcoholics in a building on the grounds of the institution, and the physician in charge said it was very unsatisfactory. Now it has been done away with, and in Germany a few years ago it was the unanimous opinion that the public should not care for the alcoholics in the hospitals for the insane. In California the last legislature passed a law that says all cases of alcoholism, as a punitive measure, should be sentenced to six months or a year or more in a hospital for the insane. Well, I pity the patients who will be sent there. I wrote to the governor and tried to get him not to sign the bill, but it was signed; the commission wanted it signed, and it was done; but when you realize that the hospitals of this state are so crowded that patients are sleeping on floors, and that the asylum at Stockton is inside of the city limits, in a

town of two hundred saloons, you will understand that it is not the proper place. They do not at all get the social surroundings nor educational influences that they should have; they are not influenced in the right direction.

DR. H. G. BRAINERD, Los Angeles: The paper of Dr. Crosby telling us that 38 or a larger per cent. of the insanity of the patients in the insane asylum is directly due to alcohol, and the diagrams which Dr. Patterson so graphically presented to us of the feeble-minded, showing the number produced by alcohol, would seem to me to be strong arguments in favor of some provision for the care of those who are breaking down through the use of alcohol. We say that tuberculosis is a preventable disease. We should get at the root of the matter and prevent the spread of the disease. Certainly if tuberculosis is a preventable disease, alcoholism is a preventable disease. What opium has done for China is being done for America by alcohol. The opium in China is certainly no more disastrous in its effects than alcohol in America. The opium habit in China was due simply to the rapacity and greed for money of the authorities. The continuation of the alcoholic habit in America is due certainly to a lack of provision for the effects of alcohol in some direction. It seems to me that the effort should be not alone towards taking care of those ruined through alcoholism but in preventing alcoholism.

DR. ROSS MOORE, Los Angeles, Cal.: We are at the present time establishing a municipal farm at which men who are convicted or accused of alcoholism, who would otherwise be put on the chain gang, or in jail for sixty or ninety or a hundred days, will be given an opportunity to reform—a work cure, with a physical examination, diagnosis and proper treatment, together with a reasonable degree of freedom. No doubt it can be worked out so the physician will determine whether or not a man is capable of staying on the farm with only a reasonable degree of restraint; that is, whether he is a degenerate criminal, or whether he is a man who is drunk and might be cured of drunkenness. Our insanity commission has met with the problem of the drunkard with reference to the asylum. The judge here has tried two or three times to send some men there for habitual drunkenness. When I have been on the commission he has not succeeded. I don't know whether he has sent anybody up there at any other times or not. I don't believe they belong there under the present constitution of the asylum. With reference to Dr. Pettey's paper, I think I have not heard for a long time as elaborate a classification of the drunkard. My own experience with drinkers has caused me to make a diagnosis before I take them for patients—a differential diagnosis as to their mental capacity. If I decide that a given patient has sufficient mental capacity, I make a contract with him to be under my care or supervision for at least six months. Then, I am in the habit of givin a three- or four-day treatment, possibly a modification of the belladonna treatment, and then, having this contract with the man, if he does not show up when I want him, I go where he is, or I have my office girl 'phone for him, and thus I keep in touch with him for some months. Almost every patient has several rough places during the first six months. He has a hard time in many ways, and is just on the verge of taking a drink; he is tired, or other causes are at work. During these six months, seeing him many, many times, he gets to see himself as I see him. He begins to analyze himself, and the cause for his drunkenness, as I do, and in that way I secure a permanence of cure which I never succeeded in securing before. Therefore, my idea of the treatment of a drug or alcoholic habitué consists in a vigorous eliminating treatment to begin with, and six months of care afterwards, during all of which time I have practically absolute control of the patient.

DR. G. H. MOODY, San Antonio, Tex.: After an observation of a great many of these cases I am convinced that Dr. Crosby has brought out very clearly and strongly in his paper that getting complete charge of his patient for a specific length of time is necessary to get results. There are a few cases, both of the drug and alcoholic habit, whose hereditary condition is favorable, as expressed by Dr. Pettey, in whom we are justified in trying a short course of treatment, either at home with the physician supervising, wisely, as Dr. Moore has suggested, or in a private sanitarium; but I believe that the plan of this state, and that of several other states, as given by our chairman, is the only salvation for those patients who have been treated a few times with futile results. I would not have opposed the bill passed in this state for the want of a better one. I would much prefer it to none. I agree that the asylum is not the best place for these patients, but in the absence of a better place I believe they should have it. As it is, the patients who go to such an institution or asylum go there because they are crazy from the drug. In two or three weeks, as we all know, they are all right, and the superintendent lets them out, and they get no good results. If we had a way of committing them to these state institutions for a certain number of months or years, and the superintendent had no more power to turn them out than the officer of the penitentiary has to turn out his prisoners, then a great many would get well, and I believe it ought to be done. Of course, I think we ought to have, preferably, an institution for inebriates. Until we get it, I think the plan of California is better than no plan whatever.

DR. J. W. ROBERTSON, Livermore, Cal.: My experience has taught me that there are two entirely distinct classes of alcoholic patients. The first are such as the Keeley treatment appeals to. They have no hereditary compulsion. They drink because they want to drink; they drink because their associations lead them to drink; they drink because of their moral irresponsibility; they have not the strength of character to refuse an invitation to drink. This class is very easy to cure. Eddyism, suggestions which the Keeley treatment give, or willpower properly directed, are usually sufficient to control them, and for that reason I believe that a month of quiet and rest, with building up of the body and nerves, gives a temporary cure. But there is another class of patients that I must confess I regard as a more serious problem. They are those whom Dr. Crosby's suggestions appeal to. They have to be forcibly restrained. You cannot persuade them; you cannot argue with them. Very often they have such a hereditary diathesis that they are compelled to drink, and nothing but enforced abstinence for a period of six months or a year would be of the slightest benefit. Even then, after I have restrained such patients for periods of months, after the physical health has been absolutely rebuilt, and they have regained their full moral as well as physical tone, they have gone off and again become drunkards. I have met these men in after years and found them reformed and honorable members of society, and have asked them how the thing was done. I had failed with them; others had failed with them. Their only reply was that they had made up their minds to quit, and they had quit. Until a man comes to this conclusion it is absolutely impossible to do anything with him. No amount of personal restraint will do more than build up the body, and possibly build up the moral character. When they have once made up their minds to reform, and then only, have I found that they absolutely do reform.

DR. DANIEL CROSBY, Fruitvale, Cal.: The subject of inebriety is so big that most medical men have been unwilling to classify and talk about it. Men of Dr. Pettey's type have been able to cure inebriety, while the remainder of us have looked on. Dr. Burnett says we are not getting at the right end. Theoretically, prohibition is the proper course, but practically we know that prohibition fails. As far as getting at the right end is concerned, we do not desire to conserve the alcoholic as such, but neither do we want the chronic alcoholics filling our city prisons and county jails; we do not want them filling our almshouses and adding thousands on thousands of dollars to the cost of maintenance of our county hospitals every year. The state inebriate hospital and farm have so far offered the best solution and England has been following the plan to a greater or less degree for twenty-five years. Minnesota, a little before New York, and the latter state now, are working out two of the best plans before the public to-day for the control of the chronic inebriate. We do not desire to conserve a worthless life, but neither do we want the worthless fellows coming up for 1,100 commitments, as did one man in New York. If this plan is not beginning at the right end, then those who are paying most attention to it are going awry in their calculations. It is not to the credit of the medical pro-

fession of California to-day that the inebriate is locked in already overcrowded asylums for the insane. The first offender should not come before the court at all, but should go before a referee and never have a court appearance. If he will be bound by his parole, very well; if he does not, then the time for court appearance is in order. It has been proved repeatedly that 25 per cent. of these individuals can be restored to normal life if they are only held long enough. Now if 25 per cent. can be rehabilitated, why tie the hands of your hospital services with delirium tremens patients and alcoholic ruins when, as a matter of fact, they can be maintained at a great deal less cost in the open air of the country than under the present plan. If the tax-paying and tax-voting public could have placed before them in plain, straightforward fashion the results of care for cure as elucidated by Dr. Pettey, and the cure and control as shown by the reports of the successfully operated state inebriate hospitals, we would not see much longer delayed this very necessary inebriate legislation.

DR. GEORGE E. PETTEY, Memphis: Some more efficient method of handling inebriates than is now provided for is certainly badly needed. Under our present system a man may waste his income, spend his fortune and pauperize his dependents by alcoholic excess and make himself a nuisance to his family and everyone about him, but so long as he commits no overt criminal act the law does not interfere and neither his family nor the community have any way of reaching or controlling him. We have gone to such extremes in our efforts to safeguard "personal liberty" that the state has lost its right to interfere with the inebriate in time to protect itself and the innocent dependents of such inebriate from the gravest wrongs. This right should be reasserted and freely used. No man should be allowed to destroy his usefulness, his productive powers, and foist himself and his dependents as a charge on the community under the guise of personal liberty. A state farm, to which the inebriate could be committed for treatment and detention and where he would be compelled to expend his energies in a productive enterprise, would, in my judgment, be the ideal way, not only to reform our present generation of inebriates but to prevent inebriety in the future. If men who abuse their personal liberty by going to excess in the use of intoxicants knew that they could be taken in charge and committed to a state farm and required to work for the public instead of themselves, they would be brought to "think upon their ways" before they had lost self-control. The existence of such a provision would furnish the most effective means of preventing the development of inebriety as well as the most practical method of dealing with it where it does exist. Our present method of haling the inebriate before a criminal court and inflicting punishment, which often falls more heavily on his innocent dependents than on himself, is as unreasonable and inefficient as it is unjust.

Energy of Radium.—Attention has repeatedly been drawn to the enormous quantity of energy stored up in radium and its descendants. That in its emanation niton is such that if what it parts with as heat during its disintegration were available, it would be equal to three and a half million times the energy available by the explosion of an equal volume of detonating gas—a mixture of one volume of oxygen with two volumes of hydrogen. The major part of this energy comes, apparently, from the expulsion of particles (that is of atoms of helium) with enormous velocity. It is easy to convey an idea of this magnitude in a form more realizable, by giving a somewhat mechanical turn. Suppose that the energy in a ton of radium could be utilized in thirty years, instead of being evolved at its invariable slow rate of 1,760 years for half-disintegration, it would suffice to propel a ship of 15,000 tons, with engines of 15,000 horsepower, at the rate of 15 knots an hour, for thirty years—practically the lifetime of the ship. To do this actually requires a million and a half tons of coal. It is easily seen that the virtue of the energy of the radium consists in the small weight in which it is contained; in other words, the radium-energy is in an enormously concentrated form.—Sir William Ramsay, President's Address before British Association for the Advancement of Science, 1911.

PREVENTIVE MEDICINE SECTION COMMITTEE REPORTS

REPORT OF THE COMMITTEE ON ADMINISTRATION METHODS OF PHYSICAL EXAMINATION OF SCHOOL CHILDREN *

The committee has confined its report to the discussion of the following:

I. Object of physical examinations.
II. Present methods and their results.
III. Fundamental problems to be considered.
IV. Specific recommendations.

I. OBJECT OF PHYSICAL EXAMINATIONS

Physical examinations are conducted for the purpose of detecting variations from the normal that interfere with the health, growth and development of the child. The normal educative process is possible only when the physical and mental conditions of the child do not vary too widely from the established standards recognized as the normal. Evidence at hand shows that large numbers of defectives are present in every school.

II. A STUDY OF THE PRESENT METHODS AND RESULTS ACCOMPLISHED

A survey of the available statistics shows that there are relatively few cities of the United States giving complete physical examination of school children, or even sufficiently complete to be of assistance to the teachers to enable them to direct activities of the pupil.

The examinations are at present carried on for the most part by the city boards of education. When the boards of health conduct the examinations little effort is made to detect defects aside from those of sight and hearing. These examinations have also been made by the teachers, nurses, medical inspectors or physical instructors, according to local conditions.

A careful comparison of the result obtained by the various methods of conducting the examinations shows that the greatest benefits are obtained in instances in which a preliminary examination is made in the grammar schools by the teacher and defective or suspicious cases reexamined by trained medical men who devote enough of the school day to this work to be free from interruptions of private practice during these hours, and in the high school, where the examinations are conducted by the physical director, and especially in instances in which the director is medically trained.

The examinations made exclusively by nurses and untrained or uninterested medical inspectors are often incomplete, inaccurate and of slight value, and little information is secured that is of use to the teacher in her education of the child.

III. FUNDAMENTAL PROBLEMS

The committee feels that there are a number of factors with their closely related interests which demand consideration before presenting specific recommendations on methods; these are the city boards of health, the boards of education, the parents, the family physician, the teacher, the pupil and the school physician, and their relation to one another.

The board of health is the organ of the state and has the authority of the law in carrying out its provisions. It deals with diseased conditions and enforces the sanitary standards prescribed by the state. Beyond this it ordinarily has little interest. With the board of education the condition is different. Its function is educative, and to it merely carrying out the provisions of the law is not sufficient. It must provide conditions, physical and mental, that make for the greatest efficiency of the individual. It must remove from the environment of the child factors that interfere with these conditions. This necessitates competent and constant supervision.

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* Read in the Section on Preventive Medicine and Public Health of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

Many families through ignorance or pride object to having their children examined by the school authorities, and feel that their rights are being infringed in this respect. This will not be so if sympathetic cooperation is secured.

Family physicians have protested against the "unnecessary examinations" sometimes not without cause, especially in instances in which unscrupulous examiners are employed.

The family physicians are not all of the regular school. We find in addition eclectics, homeopaths, osteopaths, naturopaths and science healers, with their diversity of interests and training. Their points of view must be respected and their cooperation secured. To the child the examination should be interesting and instructive.

Objection to the teachers conducting the preliminary examinations has been raised on the ground that they have neither training nor time. The teacher's first duty is to the health of the child and her training should be sufficient to enable her to do this work.

The expense necessary in establishing and maintaining a thorough system has been a serious objection. A careful study, however, shows that it is even more expensive to neglect this important work.

IV. SPECIFIC RECOMMENDATIONS

In view of the facts revealed by a study of present conditions, the committee feels that a simple, efficient and uniform standard of methods is desirable.

The committee recommends: That city and county boards of education should secure the services of trained medical inspectors; that these inspectors be sufficient in number to instruct all elementary school teachers in making preliminary physical examinations or health surveys, and thus enable the inspectors to make more thorough supplementary physical examinations when indicated; that city boards of education maintain departments of medical inspection, the heads of such departments to be medically trained men; that the cities be divided into districts with a medical inspector in charge of each district.

That each child be given a physical examination each year, preferably at the beginning.

That this examination be sufficiently thorough to detect defects that interfere, or are liable to interfere, with the health, growth and development of the child, such examinations to include the examination of the eye, ear, mouth, nose, throat, posture, nutrition, mentality and nervous functions; that in all cases showing defects or in which defects are suspected but undetermined, reexaminations be made by trained medical examiners, such reexaminations to include the eye, ear, nose, throat, teeth, heart, lungs, thorax, shoulders, spine, hips, inguinal region, feet, nutrition, mentality and nervous system.

That the preliminary examination or health survey in the elementary schools be made by the teacher or nurse who should be instructed in making these examinations by a trained medical inspector, and in the high schools by the director of physical education, or one of his assistants.

That the supplementary physical examination be made in the elementary schools by the trained medical inspector, and in the high schools by the director of physical education, if he be medically trained; otherwise by the medical inspector; that in cases in which a defect is found the teacher be informed as to its nature and effect on the physical, mental and social development of the child and be instructed in the best methods of overcoming these defects, that a careful record be kept of the results of the preliminary and supplementary examinations, such record to include the dates of the examinations and condition of pupil at that time, and only such other data as would be of future use to the teacher or director.

That these records be kept by the teacher and passed on with the promotion slip as the child advances, a duplicate being retained in the office of the health inspector.

That whenever feasible the physical examination be conducted preferably by examiners who are employed by and are under the direction of the board of education. When this is not feasible the appointee of the board of health should be approved by the board of education.

The committee recommends further:

That a greater effort be made to establish hearty cooperation between the school physician, the teacher, the family physician, the home and the free dispensaries in following up and in securing the correction of physical defects.

Respectfully submitted,

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REPORT OF COMMITTEE ON MEDICAL INSPECTION OF SCHOOLS *

EDUCATIONAL HYGIENE: HEALTH AND DEVELOPMENT SUPERVISION

To the Section on Preventive Medicine, American Medical Association: In response to the invitation of your chairman your committee herewith presents a report for your consideration as to what is or should be the essential and vital work of a department of medical inspection in the public schools, or the equivalent department of educational hygiene, or as the work is termed in California, the department of health and development. This report is submitted as a general plan which of necessity must be modified in different ways so as to form alternative systems which shall meet the needs of local conditions.

Two divisions of this field of work are advisable.

A. *Under the control and direction of boards of education*—that part of the work essential for the intelligent handling of pupils and students throughout their period of educational training; and for the maintenance of hygienic environment and hygienic activity—the field of *educational hygiene.*

B. *Under the control and direction of boards of health*—that part of the field of work concerned with the care and control of contagious and infectious diseases as a part of the field of *public health.*

EDUCATIONAL HYGIENE—UNDER THE CONTROL AND DIRECTION OF BOARDS OF EDUCATION

PURPOSES OF THE WORK

1. The establishment of biennial, annual, and, when necessary, more frequent skilled physical and developmental examinations of pupils and students by a staff of experts. The establishment of initial examination of pupils by the teaching force of the schools, as far as the teaching force is qualified, prior to the skilled examinations by experts.

2. By effective action, based on the data of these examinations, to secure (a) the correction of physical anomalies and thus remove the growth-barriers of children and youths, and (b) whenever possible and practicable, to adjust educational activities to meet the requirements of physical and mental health, growth and development, and thus establish a special field of education for the maintenance of continuous health and development supervision of pupils and students.

3. To maintain a scientific and systematic study of mental retardation and mental deviation of pupils and students by skilled examination, and whenever possible and practicable, by skilled training in special schools.

4. To establish skilled physical and health examinations of candidates for teachers' positions prior to their election to determine vital fitness for their work, and thereafter to maintain continuous supervision of health and efficiency to teachers as related to the work of the schools.

5. (a) To organize and supervise courses of technical instruction in hygiene for pupils, students and teachers, in the means of conservation of physical and mental health, growth and development; in the means of correction and pre-

* Read in the Section on Preventive Medicine and Public Health of the American Medical Association, at its Sixty-Second Annual Session, held at Los Angeles, June, 1911.

vention of defects, disease and degeneracy; (b) whenever necessary for efficiency, to give practical and technical instruction to the teaching force of the schools, while engaged in teaching, in the initial physical and developmental examination of pupils; and in the skilled physical and developmental and psychoclinical examination of exceptional pupils, abnormal and supernormal.

6. To establish and maintain well-equipped medical anthropometric and psychoclinical laboratories in the public schools which shall afford opportunity and equipment—

(a) for sufficiently skilful medical, anthropometric and psychoclinical examination of exceptional pupils and of all pupils requiring special examination.

(b) for such technical training of teachers in the laboratory and experimental phases of educational work, connected with the physical and mental examination of pupils, in clinical psychology and in experimental pedagogy as is essential for the intelligent handling of pupils.

(c) for essential work in hygiene and sanitation.

7. To exercise expert sanitary supervision in the planning and maintenance of school buildings and grounds.

8. To bring about the establishment of dental and medical clinics for pupils whose parents are financially unable to provide essential medical and dental aid.

9. Whenever possible and practicable, to cooperate with state, county and city health officers in the detection of and reporting of contagious diseases.

10. Each department of educational hygiene to constitute a bureau of practical investigation and research in educational hygiene, and as such to cooperate with state bureaus of educational hygiene whose functions will or ought to be the organization and supervision of state-wide work and investigation in this special field of education—looking forward to the establishment also of a national bureau of educational hygiene.

SKILLED PHYSICAL AND DEVELOPMENTAL EXAMINATIONS BY A STAFF OF EXPERTS: A GENERAL PLAN

BIENNIAL DEVELOPMENTAL EXAMINATIONS—APPROXIMATE OCCURRENCE

	Age
Upon entering school	6
Prior to transition period	8
Subsequent to transition period	10
Prepubertal period	12
Pubertal period	14
Post-pubertal period	16
Approximate attainment of physical growth	18

Annual and More Frequent Examinations.—Following a general plan of biennial examinations the frequency of examination must depend on the conditions of health and growth of individual pupils. Groups of pupils will stand out for whom annual examination will be essential. Other groups will require more frequent examinations. Examination should condition all work permits issued to pupils by school authorities. Examination in all instances should be at such intervals and of sufficient thoroughness to establish continuous and efficient health and growth supervision of pupils and students.

Scope of the Examinations.—Physical and developmental examinations should be sufficiently extensive to ferret out and determine, as far as possible, the causes of arrested growth, physical and mental.

1. The data of these examinations should serve as skilled information to parents and teachers in recommending and advising medical and dental aid essential for health and development.
2. When taken in connection with the school curricula and sociologic factors of the pupils' environment, the data of these examinations should form the *essential basis* for the adjustment of educational activities, both physical and mental, to meet the requirements of physical and mental health, growth and development.

The recommendations of the staff to the school authorities in this field of education should be:

1. General in their nature, applying to educational work as a whole.
2. Special in their application to the needs of individual pupils.
3. Advisory and cooperative, as a general working plan.
4. Administrative, when from the standpoint of educational hygiene, the health and development of pupils and students require and demand a change of educational activities or of environment, or both, and when such changes are possible under existing conditions.

The recommendations of the staff, when administrative, should be reversible only by the board of education and superintendent of schools.

This field of work is essentially administrative and constitutes a special field of the superintendency of schools—city or county. Modern educational hygiene is far-reaching in its demands. It looks not only to securing the correction of developmental and acquired defects, physical and mental, which interfere with health, growth and efficiency; not only to the maintenance of hygienic environment in the planning and construction of school buildings and in the arrangement and maintenance of school grounds, but in addition thereto, it maintains "that not only the content of education, but all the processes of education should be considered in relation to the health and growth of pupils and students. It challenges every subject of instruction and every principle and every method in education." Its central problem is growth and development. To this end physical and developmental examinations ought to determine defective physical and mental conditions, developmental periods of growth and stages of development, physiologic age, and, as far as possible, mental age. The staff conducting these examinations should recommend such agencies as are essential and effective in bringing about the best possible growth and development of pupils and students, and the school organization should be such as to afford ways and means of carrying out these recommendations through the cooperation of the staff, superintendents, principals and the teaching force of the schools.

For efficiency in this work it is essential that there exist continuous cooperation between a skilled staff of experts and the teaching force of the schools, which force, as far as qualified, should conduct initial physical and developmental examinations as an aid to the staff and as a matter of the more intelligent handling and training of pupils by the teaching force.

For definiteness the committee submits the following:

GENERAL ILLUSTRATION OF AN ESSENTIAL PHYSICAL AND DEVELOPMENTAL EXAMINATION

By a staff of experts and trained assistants, *for all pupils.*

General Health and Growth, past and present. Family history (exceptional pupils). Height, weight and vitality (growth indicators).

Eyesight.—Visual acuity, approximate determination of hyperopia, hyperopic astigmatism, myopia, myopic astigmatism, esophoria, exophoria, hyperphoria. Contagious eye defects, other diseased conditions and exceptional features. Color blindness (exceptional pupils).

Hearing.—Auditory acuity. Defective hearing as due to middle-ear defects or to nerve deafness. Diseased conditions, exceptional features. Pitch discrimination (exceptional pupils).

Teeth.—General conditions and cleanliness of temporary and permanent teeth, amount of decay, exceptional features. Examination of teeth to be conducted by skilled dentists whenever possible.

Mouth and Palate.—Malformation and indications of degeneracy.

Speech.—Defects of articulation, lisping, stammering, etc.

Nose and Throat.—Presence or absence of nasal obstruction, diseased or enlarged tonsils, presence of adenoids, polypi, catarrh, etc., and exceptional features.

Glandular Conditions.—Enlarged submaxillary or cervical glands.

Lung Action and Respiratory Development.—Normal. Rough or bronchial breathing. Râles—mucous, sibilant, sonorous, pleuritic. Chest development and expansion (tuberculosis or tendencies to same). Respiratory development. Exceptional features.

Heart Action.—Normal, irregular. Murmurs, functional or organic. Transition period (8 to 10 years). Any abnormal condition requiring modification of school conditions or exercises. Thorough examination conditioning physical training.

Deformity.—Deformities of head, trunk, limbs, spinal curvature, bone disease, deformed chest, shortened limbs, etc.

Nervous System.—Normal. Nervous instability, incipient, marked. Neurasthenic or hysterical tendencies. Chorea, tics, epilepsy, other nervous disorders. Examination of nervous pupils with especial reference to conditioning school activities.

Sex Examination.—Thorough sex examination when advisable. Parents should be present.

Mental Condition.—Signs of overstrain, fatigue, response, etc. General intelligence, bright, fair, dull, backward. Mentally defective. Imbecile. Imagery, memory, attention, association (exceptional pupils). See psychoclinical examination of exceptional pupils.

General.—Any weakness, defect or disease specially unfitting pupils and students for ordinary school life and activities, physical or mental, and requiring modification of school activities, especially more complete examination for the determination of physical training whenever advisable—tests of strength and endurance, results of training, etc.

Physiologic and Mental Age—Development Periods.—The determination of the physiologic and mental age of exceptional pupils, abnormal and supernormal, and the adjustment of educational activities to growth and development needs (see psychoclinical examinations), and certain modifications for all pupils at transition periods of development—8 to 10 years, and at puberty.

An Approximate Grouping of Pupils.—Based on the data of physical and developmental examinations which ought to follow the examination of pupils and students.

1. Those for whom medical and dental aid is essential.
2. Those whose respiratory or circulatory systems are defective or are poorly developed, for whom a larger amount of out of door life and physical activity is essential, or other modification of school activities necessary.
3. Those whose nervous systems are defective or poorly developed and who require an unusual amount of out of door life, physical activity, special care and skilled training.
4. The segregation of pupils requiring an unusual amount of physical activity for possible mental growth—both sexes.
5. Segregation of pupils of truancy and criminal tendencies or otherwise showing more or less degeneracy, and assignment to special schools with special training.
6. Segregation of mentally defective pupils and assignment to special schools.
7. The segregation of supernormal pupils and assignment to special schools.
8. As far as practicable, the grouping of pupils in accordance with development age.

PSYCHOCLINICAL EXAMINATION OF PUPILS AND STUDENTS

The building of a stable nervous system and a well-balanced mind is the most important work of education. For this purpose physical and developmental examinations, educational and clinical psychology and experimental pedagogy furnish the essential data by which to shape educational activities.

The correction of physical defects interfering with health and development is an established field of work, definite, clear-cut and unquestioned. The physiology, psychology and hygiene of educational training, however, is to all intents and purposes a more or less unexplored field, full of possibilities and suggestions. The educational work of the past has been all too little adapted to the biologic requirements of the child at its different periods of development.

This phase of education is of the highest importance. There is a vast army of pupils in our public schools whose growth is more or less arrested. Statistics from all sections of the country show this condition. It is a safe estimate that out of 18,000,000 pupils in the public schools of the nation 3,000,000 are repeating a grade a second, third or even a fourth or fifth time at a cost of approximately $100,000,000 annually, an expense largely wasteful and preventable, to say nothing of the loss of life-efficiency.

The more extreme stages of arrested growth, namely, the idiot, the imbecile, the feeble-minded, afford features of marked educational value to the public schools. The mental age of the idiot is never greater than that of a child of 2 years, no matter what his chronological age. The mental age of the imbecile has never exceeded the 8-year level. The mental age of the feeble-minded ranges from 8 to 13 years, never exceeding the 13-year level.

Passing these extreme levels of arrested growth into our schools and homes, all grades of mental age and all stages of more or less marked arrested growth stand out. Further, we know that the predisposition to insanity and degeneracy is marked in the more extreme stages of arrested growth, markedly greater in the feeble-minded than in the ordinary population. We know further that arrests of development of the more marked type grade insensibly into the higher levels of arrested growth found in large numbers in our public schools and in our homes, and that the same predisposition to degeneracy to a greater or less extent is an accomplishment of all stages of arrested growth. However important it may be to take intelligent care of the feeble-minded, the insane, the idiots, and imbeciles, it nevertheless is these higher retardation levels that should especially concern us because of their close kinship with feeble-mindedness on the one hand, and with adult deterioration on the other.

There is a marked need of systematic and scientific study and investigation of the moral and criminal traits of delinquent and abnormal pupils of our schools; how criminal tendencies and moral defect vary with, or are related to, physical defectiveness, with type of disease, with transitory states as exhibited in certain forms of epilepsy, in delusional and maniac depressive forms of insanity and which show themselves in kleptomaniac and suicidal tendencies and other forms of degeneracy.

There is marked need to safeguard all pupils, and especially defective pupils, by skilled training, against overpressure and unintelligent handling, particularly at the transition periods (8-10 years and 13-15 years).

The marked increase in juvenile crime and juvenile insanity during pubertal years is a known condition which ought to mean much in the safeguarding of all pupils during transition periods of growth against possible weakness and inefficiency.

It is especially important to exercise essential skilled oversight of pupils prior to transition periods of growth before immoral and before criminal tendencies become fixed; before weakness and inefficiency are allowed to develop; before excellence and superqualities, physical and mental, are allowed to remain undeveloped.

SUPERNORMAL PUPILS

There is most marked need of skilled determination of the supernormal pupils of the public schools and the adjustment of educational activities to their growth and development needs. The highest excellence and genius of the race for the future is found in potential and evolutionary form in supernormal children who embody in quantitatively superior forms those capacities that are exhibited in less degree by the masses of the young.

There is a marked need of *skilled investigation* by a skilled staff of their mental capacities and of the physiologic, anthropologic, sociologic and hereditary problems underlying their evolution and of skilled handling of these pupils. No type of pupil has been so neglected as the pupil of highest excellence and possibilities. Exceptional talent, superior capacity and intelligence that remain undeveloped or are directed in lower lines of action, is a loss not only to the individual, but to the state and to the nation. For these purposes it is essential that in addition to the general physical and developmental examination of all pupils by a skilled staff, psychoclinical examinations of exceptional pupils, abnormal and supernormal, shall be established.

The committee submits the following statement of the problems to be met and the work to be done and of the scope of the psychoclinical examinations:

1. A practical study and investigation of the hereditary personal history, of the medical history, and of the growth and development of pupils.
2. Skilled examination for the determination of—

   a. Essential medical and dental aid.
   b. Endurance and functional development.
   c. Physical growth and development as compared with a measuring scale of normal growth of pupils of the same physiologic age.
   d. A fundamental intellectual measuring scale and the determination of mental age.
   e. The acceleration or retardation of mental growth and development by comparison with this fundamental intellectual measuring scale. This will make possible and practicable the determination of the acceleration or arrests of mental

functions and the character of specific accelerations or arrests of growth; and the improvement which various capacities or traits undergo from month to month and from year to year under the training which pupils receive, and the improvement resulting from medical and dental aid.

f. The establishment of a measuring scale of motor development and of manual dexterity development.

g. The skilled determination of educational activities for these pupils.

To meet these problems of educational science it is essential that universities and normal schools and the public schools shall determine by measurements and tests of the growth and development of large numbers of normal, supernormal, and retarded pupils comparative standards of physical and mental growth, so that we may measure the differences in the capacities of the various classes of pupils, normal, supernormal and defective; also measure the differences in the rate of improvement of these capacities and adjust educational activities to meet the demands of physical and mental health and growth. These are problems for *investigation and research* and future progress. Certain definite work has already been accomplished.

The following is not given as a complete list, but for illustration of the more important part of the work. As stated above:

1. *Developmental Tests.*—Skilled physical and developmental examinations should be held for the determination of arrested growth and development; for the determination of endurance, physiologic age and functional development; of essential medical and dental aid, etc.

2. *Tests of General Intelligence.*—Binet and Simon have succeeded, after years of experimentation, in working out a series of tests by which they are able to grade with considerable accuracy the general intelligence of children. These tests make it fairly easy to determine whether a child is to be graded as idiot, imbecile, feeble-minded or normal. It is conceded by skilled specialists that these tests "give us the most satisfactory *preliminary survey* of the child that is available."

Goddard at Vineland, N. J., Huey at Lincoln, Ill., Kuhlman at Faribault, Minn., Wallin at Skillman, N. J., and others as a result of their work with the subnormal, feeble-minded and epileptic all agree with the following statement of Goddard: "I believe it is true that no one can use the Binet-Simon tests on any fair number of children without becoming convinced that whatever defects and faults these tests may have, and no one can claim that they are perfect, the tests do come amazingly near what we feel to be the truth in regard to the mental status of any child tested." At present these same men, together with other excellent scholars, are working to amplify and perfect these tests, particularly for the higher levels, and to adapt them to public school conditions. There can be no reasonable doubt but that these tests will be markedly improved.

3. *Tests of Particular and Special Abilities.*—In addition to these determinations of general intelligence, certain tests of special abilities have been successfully used in such recently established psychoclinical laboratories as those of the University of Pennsylvania, Chicago Public Schools, Vineland, N. J., Chicago Juvenile Court, Lincoln, Ill., Faribault, Minn., Clark University, Skillman, N. J., etc., as follows:

a. Motor ability as determined by the tapping test, reaction time, etc.
b. Sensory ability as by the estimation of weights, lengths, the discrimination of tones, etc.
c. Perception as by the various types of form boards.
d. Association time—controlled and free.
e. Memory-span as by a series of digits or syllables, by aussage, narrative, etc.
f. Imagination: (1) probable type of sensory imagery as determined by greatest ease or readiness of response to different sensory stimuli; (2) power of creative imagery as by solving of puzzles, various types of constructive tests, and by the completion test of Ebbinghaus.
g. Ease and accuracy of acquisition of motor skill as tested by the learning of any simple, new motor coordination, e. g., mirror-drawing.
h. Ease and accuracy of mental acquisition by association of a known with a new arbitrary symbol.
i. Logical processes as by mathematical problems, puzzles, etc.

4. *Exceptional and Unusual Abilities.*—No series of tests for the accurate determination of supernormal or exceptional abilities either general or special has as yet been worked out and standardized. It has, however, been shown in many instances that the application of the two classes of above-mentioned tests supplemented by careful observation and further testing along lines wherein the results of these tests suggest that remarkable abilities may lie hidden, do frequently make possible the discovery of that sort of talent, the recognition of which is most highly important. The desirability of standardized tests for this special purpose needs no further emphasis than that afforded by the statement that the peculiar type of genius with which we are here concerned very frequently escapes the notice of teachers, parents, and the child himself, and that frequently it is not called out by any of the ordinary school work nor by the ordinary environment.

Until standardized tests are developed we shall be compelled to use systematic observation of interests in art, music, mechanics, languages, mathematics, sciences; systematic observation of traits and capacities favorable to development along these or other special lines, systematic observation of the *acquired interests* and special *habits* derived from reading, companions, chance happenings, etc.; further by taking pains to see that the pupil's range of activities is sufficiently wide to call forth any special capacities which he may possess. Especially desirable is it that children who do not fit well into the usual order of interests and activities of home and school be given such opportunity.

Investigation and research in this field of education in universities, normal schools and public schools; in institutions for the feeble-minded and for the insane, is being energetically carried forward to-day and is establishing a reliable series of general and technical tests for the examination of pupils which are eventually to become invaluable in the determination of normal and arrested growth, physical and mental; invaluable in the science of education and of human efficiency. The field of the expert in this work is medical, psychologic and pedagogic. It is difficult to say where it should begin and where it should end.

INITIAL PHYSICAL AND DEVELOPMENTAL EXAMINATIONS BY TEACHERS; TECHNICAL INSTRUCTION OF TEACHERS; SCHOOL NURSES

Efficiency in education requires a certain degree of skill and proficiency on the part of teachers to give initial physical and developmental examinations; to make reliable preliminary health and development surveys of the pupils over whom they have charge. Adequately intelligent handling of pupils is not possible without the cooperation of a teaching force, adequately skilled in these regards, with a staff of *experts* in educational hygiene.

The committee submits the following illustration of an initial health and development examination which may reasonably be expected of teachers who are working with a skilled staff:

Health.—Good, fair, poor. Frequent colds. Lack of vitality. Has been sick a good deal.

Eyesight.—Eyes inflamed, watering or painful. Crusts on lids. Nervousness, dizziness, indigestion, squinting, scowling. Holding head to one side or book close to face. *Frequent headaches—blurring of print.* Lack of application.

Visual Fractions .....

Hearing.—Normal. Deficient, left, right. Variable. Discharge from ears. Mental dulness apparently due to poor hearing.

Teeth.—Apparently good. Decayed. Filled, crowded and irregular. Need attention. Transitional stage.

Nose and Throat.—Indications of adenoids or enlarged tonsils, mouth breathing, variable hearing, nasal voice. Lack of vitality, arrested growth, adenoid face.

Speech.—Poor articulation, lisping, stuttering or stammering. Poor resonance of voice.

Chest Development.—Flat chest, stooped shoulders, shallow respiration.

Heart Action.—Shortness of breath, fatigue, pallor, poor circulation.

Nervous Condition.—Undue nervousness, easily confused, poor control.

Vitality.—Endurance: Good, fair, poor. Fatigues: Easily, slowly. Cause .....

Physical Development.—Growing well—poorly—undergrown. Muscle coordination—good, fair, poor.

Development Age.—Exceeds—is less than—numerical age.

Mental Development.—Good, fair, poor. Arrested growth—precocity. Response—quick, slow, strong, weak. Type—sensory-motor. Memory—good, fair, poor. Attention—good, fair, poor. Association—good, fair, poor.

Ability to Do School Work.—Good, fair, poor. Excellent in ..... Deficient in .....

Repeating the grade .....

Retarded in normal progress.....years.

Causes of Retardation.—

Special Data.—

Further, efficiency requires that teachers of special classes and special schools should develop to a considerable extent the insight of the skilful diagnostician. Special classes and schools constitute the nascent field of educational advance and require the highest order of skill in education.

That effective work and cooperation of a skilled staff and teaching force may result, it is, therefore, essential that the members of the staff give more or less technical and laboratory instruction and demonstrations to teachers, in the initial and skilled examinations and technical instruction in educational hygiene. There is a marked need at present of more or less practical and technical instruction of this order.

The universities and normal schools in the past have not organized their courses of education with sufficient emphasis on the thought that health and development was the first purpose of education and that informational work was secondary and accessory.

Whatever the university and normal instruction may be, there will always be more or less need of practical and technical instruction of teachers by a staff of experts in the field of educational hygiene, when teachers are engaged in field work, in which educational problems are nascent and full of meaning to teachers, pupils and to the state.

SCHOOL NURSES

In this program, school nurses are assistants to the staff. Their field work is essentially as follows:

To assist members of the staff in the skilled examination of pupils and otherwise as assistance is needed.

To assist teachers in making preliminary surveys of their pupils and in giving initial examinations, notifying parents of essential needs of pupils, etc.

Visiting parents and in all justifiable ways establishing effective cooperation between home and school.

Further, the function of the school nurse is that of the social educator in the field of hygiene. As such, the work of the school nurse is one of high order.

The staff of experts, the teaching force of the schools and school nurses, *working from the standpoint of education*, form an educational corps to secure the effective cooperation of home, school and school authorities in meeting the requirements of the physical and mental health and growth of pupils. When educational means fail, the law must remedy instances of neglect of health and growth of children.

THE TEACHING OF HYGIENE

One of the most urgent vital needs of the schools is the practical and effective teaching of certain phases of biology, physiology, psychology, educational and public hygiene. It is the field of prophylaxis in education as well as in medicine, a field requiring the effective cooperation of both education and medicine.

This field of education is yet in its infancy. An efficient department of educational hygiene in the schools under the direction of a skilled staff is essential for its growth and development.

PHYSICAL AND HEALTH EXAMINATION OF TEACHERS

The health of the teachers is one of the most important factors of the pupil's environment. Whatever action is essential ought to be taken by school authorities to insure physical and mental health as a fundamental characteristic of the teaching force of the public schools.

For this purpose skilled physical and health examinations furnish the essential data and should be required of all candidates for teachers' positions prior to their employment, and thereafter in whatever particulars may be essential to protect the schools against inefficient teaching due to lack of vitality and poor health of teachers on the one hand; and on the other hand, to exercise such hygienic supervision of school environment and curricula as may be essential to safeguard the teachers' occupation against unhygienic requirements and conditions of work; to act as an educational force in establishing such hygienic conditions and requirements of teachers as shall make possible the highest efficiency in the teachers' profession.

The health of the teaching body is an important aspect of educational hygiene and as such requires the effective carrying out of some reasonable and practicable course of procedure in regard both to the actual health of teachers and to the conditions and requirements of the teachers' work.

THE PLANNING AND MAINTENANCE OF SCHOOL BUILDINGS AND GROUNDS

The planning and maintenance of proper hygienic and physical conditions of school buildings and grounds is a work of which the main purposes and facts are well known, and one which in the past has been most markedly disregarded.

Reliable authorities, as a whole, agree in saying that there has been no place where all consideration of health has been so disregarded as in the construction of school buildings, churches, public halls and the buildings of the average college or university. A recent writer states (1909) the total value of all public school buildings of America is $700,000,000, but in point of fact one-half of them are so abominable that they should be torn down forthwith and a quarter more of them should be reconstructed. Recent school buildings are much better, and yet any number of faulty constructions are still going on. What is needed is yet a more vigorous educational campaign in what hygiene, sanitation and efficient living require. What is needed still more is:

1. The endorsement of certain standards and requirements in the planning and maintenance of school buildings and grounds by state and national educational and medical organizations.

2. The enactment of legislation which will define these standards and insure the erection and modification of school buildings in accordance therewith.

The committee submits the following as some of the essentials which ought to be incorporated in needed legislation. The "Ten Commandments of Schoolhouse Construction," by William E. Chancellor of Norwalk, Conn., are hereby abbreviated, modified and submitted as excellent:

1. Whenever possible, the school building should have sufficient ground and be so oriented on its plot that into every schoolroom the sunlight will come directly at least one hour each day.

2. Every schoolhouse, whether in city or in country, when over one story should be strictly fireproof.

3. Every schoolhouse should have at least two outer doors, for entrance and exit, with doors opening outward, and one outer door for every two rooms above four ground-floor rooms; and at least two stairways, with an additional stairway for every two rooms above four upper-story rooms, stairways not over 5 feet nor less than 4½ feet wide. In other words, the fireproof building should be as nearly panic-proof, also, as human ingenuity and material sources permit.

4. In every schoolhouse the halls should be well lighted from end to end.

5. The toilet conveniences, when possible to avoid it, should not be placed in basements; either isolated towers or separate buildings should be used.

6. Every child is entitled to at least 20 square feet of floor-space in each class-room attended, and to at least 300 cubic feet of air-space, to a complete change of air every eight minutes, and to playground space at least equal to class-room space. With artificial heating and ventilating systems the

problem is extremely difficult. Fresh air taken into the heating chamber should be taken from a height of 10 to 12 feet above ground. All air-ducts should be kept free from dust. The heated air should contain the proper amount of moisture. The air-ducts conveying the foul air from class-rooms should be of sufficient size and construction that the change of air is possible.

7. Unilateral or quadrant lighting has come to stay as the standard. With it has come the standard of not less than 20 or more than 25 square feet of floor space as the lighting area. The arrangement of this lighting is a technical problem not well met thus far.

8. Each class-room should have its own separate wardrobe.

9. Each class-room should have two or three sets of lockers for books so that day and evening pupils, or morning, afternoon and evening pupils, may use desks without interference with one another's property and without the resultant contamination and disease infection.

10. Hitherto, the notion has been to fit the school pupils into desks and chairs for book study. The new idea is to give them space and opportunity for activity and development. It follows that the school, instead of being the mold for the pupils to fit, must itself be molded by the course of study. The old unit idea of fifty children to a room and as many rooms of a standard size as there are classes of fifty children each is giving way to the idea of the universal school with such rooms as these also, viz.: (a) assembly and music halls; (b) physical training drill-rooms or gymnasiums; (c) drawing rooms; (d) offices and rooms for principal, head teachers, janitor, etc.; (e) science and art museums; (f) libraries and reading-rooms; (g) work rooms for manual training, trades, handcrafts and domestic science and art. In every instance in which desks are used in class-rooms, the desk should be adjusted to the child and not the child to the desk.

A BUREAU OF INVESTIGATION AND RESEARCH

Each department of educational hygiene should act, as far as practicable and consistent with the required established work, as a bureau of investigation and research.

The functions of departments of educational hygiene are twofold:

1. Carrying out certain established work of the schools.

2. Investigation and research of problems of health and development, of clinical psychology and of experimental pedagogy.

Luther Gulick gives the subject good and timely expression essentially as follows:

"Notwithstanding the great damage or degeneration that the vision of American school children is constantly undergoing, there are few school boards in America that have in their employ technical experts to decide on questions relating to eyesight. Schoolbooks are adopted but no standards have been established based on adequate research as to the length of lines for the various ages, size of type, size and shape of letter in connection with the lines; the width of the margins, the use of half-tones as compared with outline drawings, the use of dead-finished as compared with coated paper, and similar problems. There are authorities but no experts in the employ of departments of education who can speak authoritatively from the standpoint of special study made of these conditions as they exist in American schools.

"This extraordinary condition with reference to the problem of vision does not stand alone. Through the school we have changed the life of the child from one of predominant activity to one predominantly sedentary in character. During five hours of the school day for ten months in the year children are obliged to be seated for the major portion of the time. So extensive a readjustment of the life-habits of the young of a species has never before taken place. Its effect on digestion, circulation, nutrition and posture are as yet unknown. Yet there is not employed by any board of education in America one expert to make a special study of this group of problems centering about the changed conditions of life as they exist under the conduct of the modern school.

"We know that growth is more fundamental than education; that when educational demands are too severe, growth is interfered with; yet there is not a school in America that systematically weighs and measures its children to ascertain whether or not they are growing normally, and then readjusts the school tasks to fit this fundamental physiological condition.

"We know that nervous diseases among children are increasing. We believe that these disorders are related to the increased tension on the children. Many believe that this is due in part to the tasks imposed by school life, and yet there is not a board of education in America that is employing an expert to ascertain the facts with reference to these problems."

When we add to these illustrations the problems connected with the physiologic and mental age of pupils, the standardizing of tests for the establishment of more reliable measuring scales of growth and development essential before education can become a real science, the need of technical skill of the highest order stands out forcibly. Dr. Gulick well puts the matter thus: "The need of skill and power within departments of education to see that the fundamental conditions of human life, health and growth, are properly conserved."

EXPERTS IN EDUCATIONAL HYGIENE

Two classes of experts stand out as preeminently qualified for work in this special field of education:

1. The psychologist-educator. An expert in child hygiene, in educational and clinical psychology and in practical experimental pedagogy; skilled in physical and mental diagnosis, of normal and abnormal growth and development and having a knowledge of elementary medicine; a thoroughly trained, broad-gauged expert in education.

2. The skilled physician who has had sufficient training and acquaintance with educational work.

ACCESSORY AND ESSENTIAL IN THE FIELD OF EDUCATIONAL HYGIENE

Accessory and essential in the field of educational hygiene are the following:

1. The establishment of medical and dental clinics for pupils whose parents are financially unable to pay the customary fees for medical and dental services is essential to efficiency in such phases of this work as pertains to essential medical and dental aid. Cities and counties throughout the United States abound in large numbers of homes in which parents are unable to meet customary fees, but many can pay partial fees. The embarrassment concerned with making known financial need by parents and many other difficulties make the establishment of medical and dental clinics a marked necessity.

Clinics of this order have been and are being established and the results are essentially valuable, since they give a tangible meaning to the work where the need is most evident. Both parents and teachers appreciate this tangible result. The further development of the whole field of work thereafter becomes easier.

2. The cooperation with city, county and state health officers in the problems of public health as they stand out in the schools.

The care of contagious and infectious diseases and related problems of public health as a matter of expediency and efficiency should be controlled and directed by boards of health.

This is the older and more crystallized form of medical inspection of schools and is admirably carried forward in many of the best cities of the nation. The scope of this paper does not permit its further discussion.

A RECOMMENDATION

The educational progress of the future is largely conditioned by the right solution of the problems of educational hygiene. No field of educational endeavor is more beset by perplexities and problems.

Your committee, therefore, joins in a recommendation already made by Dr. Terman of the Department of Education of Leland Stanford University, essentially as follows: That steps be taken to bring about a conference of representatives from the United States Department of Education, the National Educational Association, the American Medical Association,

the American Institute of Homeopathy and other national medical associations and the Russell Sage Foundation for Child Welfare, which committee, after joint consideration of the problems involved, shall formulate and recommend alternative systems of educational hygiene which in time would be accepted as standard requirements in this special field of education.

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REPORT ON METHODS OF SCHOOL VENTILATION BY THE CHICAGO COMMISSION ON VENTILATION *

In the publication called "Open-Air Crusaders," information is given as to three types of schools—open-air schools, cold-room schools and ordinary schools. It is well to bear in mind that these are three different types and that they are suited to three different types of children.

OPEN-AIR SCHOOLS

The open-air school is expensive to maintain. It is unnecessary except for a small group of children. Its field is the clinically tuberculous children, the distinctly subnormal children from a tuberculous environment, and a certain small percentage of distinctly subnormal children from non-tuberculous homes. It might be argued that children of this class are better off if they are not in school at all. There is an occasional child of whom this is true, but it is not true of the great mass of children of this group. The years of school are immensely valuable from both a pedagogic and a physical standpoint. The child should have an education if it can be had without physical prejudice. But these children are very much better off in a physical sense in the proper physical environment of open-air schools, under the proper control of such schools, learning the lessons of right living, than they would be at home; and, finally, the educational value of such schools to the family and to the neighborhood is to be taken into account. These are the things which make open-air schools worth while, even though the number of children taught in them is small. Open-air schools require extra clothing, extra food, sleeping or quiet rest periods, medical supervision and individual instruction. In such schools there is shielding against wind, snow and rain. Otherwise, the weather conditions are about as they are in the open. "Open-Air Crusaders" gives instructions in dressing and feeding the children in such schools.

COLD-ROOM SCHOOLS

Cold-room schools are probably slightly more expensive to maintain than ordinary schools, but the difference is nominal. Their field is caring for a group of children who are more nearly normal than the group properly cared for in open-air schools. In them there should be no children with open tuberculosis or in the contagious stage of any other infection. However, they should take care of the great majority of children who have subinfections and latent infections, but which are not contagious. The field of cold-room schools includes the following groups of children:

Pale anemic children, flabby children, children with enlarged neck glands and tonsils, adenoids, children who are mouth-breathers, children with frequent headaches, all children who catch cold easily, children who contract contagion easily, and all children who fail to make grade.

This means that there should be a cold room in every school except in the very congested parts of a great city where schools are very close together. In such places the cold-room children from three or four schools can be sent to one school and half or all of that school can be operated on the cold-room basis.

In cold-room schools the windows should be thrown wide open; a few screens for diverting the air can be used to advantage. The temperature of such rooms should be around 55 F. It should not go higher than 60 F. on days when artificial heating is maintained. It should not go lower than 50 F. Effort should be made to keep it at 55 F., as shown by thermometers so placed that they will show the temperature of the occupied part of the rooms and not that of dead spaces or walls.

Children taught in such rooms do not need to have clothing or food furnished them. They are comfortable in street wraps and gloves, such as they get at home. The usual desk arrangement of ordinary class rooms is not adapted to cold schoolrooms. The proper arrangement is one which lends itself to a good deal of moving around by the pupils. Such pupils need, say, 10 per cent. more than the usual amount of medical supervision. The service of the teacher is at least 10 per cent. more individual.

Only a few of the children who come to the cold-room schools would be better off if kept out of school. In the cold-room school group belong most of the children who by reason of poor physical condition are now kept out of school for fractions of school years by their parents. Almost everyone of these children would be better off in such a school with its good hygiene, good control and educational opportunity than he would be in his home. And, in addition, the educational influence of such schools on the students, the families and the neighbors is magnificent.

For the authorities to furnish food and clothes in such schools is a mistake. Their great value lies in driving home the idea that this large group of children can be inexpensively cared for; that curative methods are right at hand; that they are inexpensive and that they may easily be applied.

ORDINARY SCHOOLS

But very much the most important group of children is that comprised of just the ordinary children who are taught in the ordinary schoolrooms. They are the most important because they constitute much the largest group. How can we get better ventilation for them? Air-borne infections are numerous in spite of the present tendency to doubt the existence of certain of them. We still have air-borne infections, especially when we include subinfections and latent infections. There are the air-caused conditions, such as frequent headaches, pallor, muscular flabbiness, enlarged glands, tonsils and adenoids, and increased susceptibility to colds and infections with the usually described contagions.

The agencies causing harm in air in the order of their importance are: (1) bacteria, (2) improper temperature, (3) low humidity, (4) lack of air movement, (5) dust, (6) carbon dioxid, (7) carbon monoxid, (8) other agencies.

The measures necessary to prevent harm being done by these agencies are as follows:

1. Bacteria.—To exclude from the schoolroom all carriers of infection.

A. All cases of typical, atypical and carriers of diphtheria and typhoid fever.

B. All cases of typical and atypical scarlet fever, measles and whooping-cough.

C. All open cases of tuberculosis.

D. All unvaccinated children.

E. All children with colds.

F. All special contagions under special circumstances.

* Read in the Section on Preventive Medicine and Public Health of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

2. Temperature.—The temperature of the schoolroom should not go above 68 F. during the days when the rooms are artificially heated.

A. There should be a thermometer in every schoolroom.

B. It should be placed about 4 feet above the floor. It should be attached to an inside wall in such a way that it is insulated therefrom.

C. An hourly record of the schoolroom temperature should be a part of the school routine. Such a record should go to the governing authority. If there is much difference between the temperature in different parts of the room this should be of record.

D. The temperature of the schoolroom should be 60 F. when the students come in from play. It should reach 68 F. within twenty minutes after the children are in their seats. If at any time it goes above 72 F., the children should be dismissed from the room.

E. When the children are at play the windows should be thrown wide open and the room aired.

3. Humidity.—The humidity of artificially heated rooms is always too low unless special humidifying provisions are made. Artificially dried air predisposes toward infections by drying up the membranes of the respiratory passages. It especially predisposes toward subinfections and latent infections.

A. The air of a schoolroom should have a relative humidity above 40 and as near 70 as possible.

B. Window sweating and frosting softens the light in the room and releases some heat. It is therefore an advantage rather than a disadvantage.

C. Wall sweating does no harm except where it harms the wall; therefore it may or may not be objectionable.

4. Air Movement.—Air which is too still does harm because the air in the aerial envelope gets too hot and too foul. The same is true in a lesser measure of the air in the breathing zone. Such air being in contact with the body or just from within it, is the hottest, foulest air in the room. There is no comfort or well-being unless this air is displaced promptly. Appreciable currents are needed for its displacement. Where there is no air movement, the aerial envelope will overheat. The necessity, then, is for appreciable air currents. These are needed in cold weather, just as they are in warm weather. Diffusion currents do not suffice.

5. Dust.—Dust does harm by assisting in infections, subinfections and latent infections. Schoolroom air is generally not very dirty. Measures for its betterment are as follows:

A. Control of blackboard dust.

B. Control of cleaning methods.

6. Carbon Dioxid; 7. Carbon Monoxid; 8. Other Agencies.—These slightly harmful agents are well cared for under the use of prevailing measures.

METHODS OF VENTILATING SCHOOLS

There are few ventilating problems which are so difficult as those of the schoolroom. The children come from many sources. Therefore they bring in many varieties of bacterial life. The pupils while at work are inactive physically, therefore they generate but little heat and their feet get cold easily. They are fixed in their occupation of every part of the room. Those who are near the outside windows must stay there. Those who are near the inside wall must stay there. Therefore there is the maximum need for a uniformity of heat and air distribution. The pupils are highly susceptible to infection. Their bodies are highly impressionable. Here is a combination the difficulties of which are hard to duplicate.

The difficulties are almost wholly connected with the necessity for heating. In warm weather ample air movement is had through open windows. On very dusty days wiping the desks with a moist cloth is easily done and removes the only objection to window ventilation. In cold weather, and especially in cold weather in a very severe climate, the difficulties appear.

If the school is heated by stoves the result will be disastrous unless special provision is made for fresh air and its conditioning. The best outlet is through the fire itself. If it be argued that there is no ventilation of the upper 4 feet of air in such rooms, it can be answered that such unoccupied space does not need to be ventilated. But an arrangement providing for all the air outgo through the stove would furnish too much heat and at the same time be inelastic and sometimes inadequate. Supplementary outlets should be provided around the stovepipe, thus getting the benefit of the indirect draft at that point.

Where feasible some of the inlets should be through floor-ducts opening under the stove. Windows used as accessory inlets should have deflectors extending the width of the sash. The bottom of the deflector space, the window-sill and the window-sash should have an outward, downward slant to facilitate the removal of cinders and dirt and so that water may drain out. If the school is heated by steam or hot water, the air preferably should be heated by indirect radiators in the basement and introduced through flues. Where this is impracticable air may be introduced through direct radiators supplied from openings in the outside walls. Such radiators are called direct-indirect radiators, and in practice it has been found necessary to have enough plain direct radiators to heat each room independently of those used to warm the air-supply. Eduction flues must be provided, and these should have both floor and ceiling openings, the latter for use in most effective ventilating and cooling; but these must be provided with closing devices and must generally be closed when heating the rooms.

Where the rooms are heated and ventilated by a warm-air system, the inlets should be about 8 feet above the floor, and the outlets near the floor line on an inside wall. Such installations will not be satisfactory without some accessories for stirring the air. Electric fans, where there is an electric current, will convert a bad installation with a still, morgue-like air into one which is satisfactory. No system which makes use of diffusion currents alone is satisfactory, even where 2,000 to 3,000 cubic feet of air per hour per occupant are furnished. When the temperature is kept down, the humidity kept up, and currents are always perceptible, the quantity of air supplied need not exceed 1,000 cubic feet per occupant per hour. In very exceptionable installations where there is little waste space and the air can be kept moving actively, as, for example, in street-cars, the Chicago ordinances require less than 500 cubic feet per hour per occupant. Where there is no electric current and fans cannot be used, we know of no way to create perceptible currents except through windows. Such openings must be covered by deflectors. The air which is to be heated should never be brought in contact with iron hot enough to char the dust and make the air smell burnt.

TO INCREASE HUMIDITY

Where heating is done by stoves, pans of water on the stove and in other places around the room help to increase the humidity. If the heating is done by steam radiation, buckets and pans can be hung on these, but the greatest good will come from allowing steam to escape into the room from the radiators. If the heating and ventilating is done by a hot-air system, jets of steam should play into the intake ducts.

The heat required for the evaporation of water to bring the relative humidity up will be compensated for by the lower temperatures which can be maintained in the schoolroom.

TO DECREASE DUST

Blackboard dust may be kept down by using erasers which are very slightly moistened.

Floor dust may be obviated by (a) vacuum cleaning, (b) sweeping at proper times, (c) sprinkling or sawdust preliminary to sweeping, (d) moist dusting, (e) making the students wipe their feet.

SUMMARY OF RECOMMENDATIONS

1. Schoolrooms should not be heated to a point above 68 F.

2. The thermometer should be located about 5 feet from the floor on an inside wall not closer than 6 feet to an air outlet.

3. The thermometer should either be suspended, or so attached to the wall that it will record the temperature of the air (and not that of the wall).

4. The temperature of the schoolroom should be 60 F. as the pupils enter the room after they have been taking exercise, and it should reach 68 F. within twenty minutes. The temperature of the schoolroom should be recorded each hour and this record should be sent to the proper authority.

5. The air in the room should be kept actively in motion. A sense of stillness is always to be avoided. Electric fans for this purpose are advised.

6. During all recess periods the windows should be opened wide and the rooms "blown out."

7. The air inside should not be drier than that outside.

8. The air inside should have 50 per cent. to 70 per cent. relative humidity and the outside walls should be built with air spaces or other insulation so as to make it possible to reach this humidity before wall-sweating begins.

9. Window-sweating, so far from being a disadvantage, is a distinct advantage, in that it softens the light.

10. Dust should be kept down in the schoolroom by using blackboard erasers which are faintly moist; by vacuum-cleaning, or by opportune and proper sweeping.

11. With proper wall insulation very little heat is required for a schoolroom even on days of zero weather.

12. All windows used for continuous air-supply should be provided with deflectors, preferably of glass, placed at their bottoms. These should extend the width of the sash and be so arranged as to deflect the air upward when the windows are open.

13. In buildings equipped with ventilating systems when the windows are raised to flush out the rooms, all rooms should be flushed simultaneously, in order to interfere as little as possible with the proper operation of the ventilating system.

14. In climates where the air must be heated before it is discharged into the room the simplest procedure is to take this air in through indirect radiation.

15. So far as we know, the best results are obtained by forcing the air through the indirect radiation by means of fans, delivering it upward in each room through a multiplicity of openings in the floor and removing it at the ceiling.

16. Where fans are not used the inlet to the rooms is best placed near the ceiling, with a foul-air outlet at the floor for use when heating the room and a foul-air outlet at the ceiling for use when ventilating or cooling the room, the latter opening to have a device whereby it may be closed at will.

17. The method of ventilation known as direct-indirect, in which the cold air enters through openings in the walls of each room and passes through radiators, is effective only when outside conditions are ideal and the use of this system except as a makeshift is deprecated.

18. Where schoolrooms are heated by stoves some of the air should be taken into the rooms through windows provided with deflectors. Some of it should enter through a duct in the floor and discharge around the stove.

19. Where steam is available steam jets should be employed to humidify. Where steam is not available, pans of water on the radiators, kettles on the stove, containers filled with water or other moistening devices should be used around the room. These should be abundant. The usual small pan is not adequate.

20. People with the following diseases, either through contact or infection of the air, are capable of doing harm and should be excluded from the room: small-pox, measles, scarlet fever, diphtheria, whooping-cough, chicken-pox, poliomyelitis, cerebrospinal meningitis, influenza, colds, coughs, tuberculosis, typhoid fever, trachoma, itch, lice, and some others of no consequence in Chicago.

21. Where schools are ventilated by unsatisfactory methods great improvement can be effected if to them the following additions are made:

1. If fans or other forms of agitators are installed.
2. If humidifiers are installed.
3. If the temperature is kept at 68 F. or below.
4. If the windows are raised and the air blown out at least three times a day.

22. Open-air schools are schools for tuberculous or other definitely subnormal children. In them the temperature and humidity is that of the open air. The only change from the straight open air is that there is some shielding from the wind, rain and snow. The children in such schools require special food, special clothing and special rest hours.

23. Cold-room schools are those in which there is some shielding against cold, wind, rain and snow. The temperature should be 55 to 60 F. and the relative humidity around 70. Such rooms are for children who have enlarged glands, adenoids or are pale, anemic, headachy — in a phrase, children who are moderately below par. Such children wear their own wraps during school hours. They do not need school feeding or nourishment more than other children require. They do not need an hour for sleep.

The Chicago Commission on Ventilation:

W. A. EVANS, M.S., M.D., LL.D.
F. O. TONNEY, M.D.,
Chicago Department of Health.
PROF. J. W. SHEPHERD,
Chicago Board of Education.
GEORGE MEHRING,
W. L. BRONAUGH,
S. R. LEWIS,
Illinois Chapter, American Society of Heating and Ventilating Engineers.

A RAPID METHOD OF INOCULATION AGAINST TYPHOID FEVER

METHOD OF ADMINISTRATION OF VACCINE IN SOME 3,500 INJECTIONS IN THE EIGHTEENTH UNITED STATES INFANTRY, MANEUVER DIVISION SAN ANTONIO, TEX.

KENT NELSON, M. D.
Major, Medical Corps, U. S. Army
AND
W. E. HALL, M.D.
First Lieutenant, Medical Reserve Corps, U. S. Army
SAN ANTONIO, TEX.

Our experience covers the administration of the vaccine in 3,500 separate injections and we feel that this number is sufficiently large to justify confidence in our method. In the administration of the vaccine there are several essentials which are of the greatest importance, as follows:

1. It must always be clearly borne in mind that this vaccine is a bacterial suspension and not a solution, for on a thorough understanding of this one point will rest much of the success or disaster attending its administration.

2. The necessity of cleanliness in its administration is imperative.

Soon after the regiment arrived in San Antonio an order was issued making it obligatory to all (officers, enlisted men and civilian employees attached to the regiment) to submit to the inoculation.

The regiment was in camp under service conditions as far as supplies and equipment were concerned. The medical department had only the equipment necessary for a regimental infirmary for the administration of first aid. This infirmary is in no sense a hospital and sick are never retained in it, always being transferred to the field hospitals. With this meager medical equipment four problems confronted us:

1. The administration of the vaccine in a cleanly manner so as to insure against infection and subsequent admission to sick report.

2. The protection of the individuals, one against the other, by not using the same needle twice without reliable sterilization.

3. The equalization of the reactions by administering uniform and accurate doses of the vaccine.

4. Inoculation of the command with the maximum degree of rapidity.

EQUIPMENT, PERSONNEL AND TECHNIC

In this regiment the equipment and personnel used for the rapid inoculation of a large body of men was as follows:

Equipment.—One alcohol stove with a shallow pan of about 1 quart capacity. Two hypodermic syringes of a make which permits sterilization by boiling, with six sharp needles for each. One bottle each of tincture of iodin and collodion with camel's hair brushes. Two boiled medicine glasses, some clean towels and a small quantity of sterilized gauze.

Personnel.—Two medical officers; one sergeant, hospital corps, in charge of the individual record of the inoculation; one private, hospital corps, to apply iodin to the arms; one private, hospital corps, to apply collodion to the needle punctures; one private, hospital corps, in charge of the stove with constantly boiling water.

A box or something suitable for use as a table is covered with clean towels and on these are placed a few pieces of sterilized gauze to receive the sterilized syringes and needles and the sterile medicine glasses containing the vaccine.

The inoculator immerses the needle in the vaccine in the medicine glass; after filling the syringe he stirs the vaccine by discharging the syringe into the glass; this is done several times and should be repeated at frequent intervals throughout the inoculation because of the fact that. the vaccine being a suspension and not a solution, precipitation of the bacilli will occur and dosage (as far as numbers of the bacilli administered) would not be uniform.

So far as the inoculation is concerned, it is immaterial whether or not the subject has had a bath the same day or a week before.

On arrival at the infirmary the men are directed to roll their sleeves well up to their shoulders. An assistant with iodin then paints an area about 15 mm. in diameter at the insertion of the deltoid muscle. This completed, the man steps forward to the physician, who is ready with a syringe with sterile needle attached and filled with well-mixed vaccine. The needle is plunged into the skin through the iodin-painted area, the proper quantity of vaccine is discharged and the needle withdrawn, when the man passes to the assistant who applies collodion to the needle puncture, thus sealing the wound at once. The man is directed not to roll his sleeve down until the collodion has hardened when the operation is complete.

After an injection has been given, the inoculator detaches the needle used and it is transferred to the boiling water by the assistant in charge of the stove, who returns a clean needle from the boiling water to the inoculator. The needles are withdrawn from the water in the order of their entrance. This arrangement and the number of needles used permits one needle to be in use and five needles to be constantly boiling.

In this regiment and with this method, by which each man has a freshly boiled needle and a sterile hypodermic (which, by the way, is reboiled once every hour), we have been able to vaccinate men at the rate of 300 inoculations per hour. The efficiency of our cleanliness and the accuracy of our dosage has been demonstrated by our results which we now enumerate.

1. In this series of 3,500 injections of the vaccine we have not had a single case in which the temperature rose to 102 F.

2. No infection of any character has been observed, not even a suspicion of such an accident.

And last but not least, there has not been any evidence of any ill effect of any nature whatever which, in our opinion, can be traced to the vaccine.

These results we attribute, of course, to the accurate preparation of the vaccine and also to our method of administration, in which the iodin, careful sterilization of instruments, and most careful mixing of the vaccine in each syringe dose given were used.

Care must be observed to give the vaccine subcutaneously and not intravenously, as happened in one case which was noted by us, but did not occur in our regiment. In this case of intravenous inoculation the puncture was not made at the insertion of the deltoid muscle but well down on the anterior aspect of the arm.

In this case the reaction was extreme, temperature high, diarrhea, malaise and herpes labialis were marked and prostration existed for three days. At the site of puncture absolutely no local reaction was noted, not even redness—and the reaction commenced almost immediately after the inoculation—significant evidence that the vaccine entered intravenously.

STAGES AND DEGREES OF REACTIONS

In this series of inoculations, not a single case reached a temperature of 102 F. and in not a case did the reaction exist longer than twenty-four hours; in the vast majority the reaction was over in twelve hours. The reactions are considered under the heads of local and general.

LOCAL REACTIONS

Frequency.—As a rule the local reactions were more numerous after the first dose, less so after the second dose and of least frequency of occurrence after the third dose.

Character.—To us a typical reaction consists of an acutely inflamed area surrounding the point of inoculation. The size of this area may vary from 1½ to 3 or 4 inches in diameter. It does not look like an abscess. It is hard and indurated and has considerable local temperature, the entire arm may ache more or less and the axillary glands are somewhat tender.

Time.—The height of this reaction is reached within eight or ten hours and by the end of twenty-four hours, although the area around the point of inoculation is still red, it has ceased to be painful and the patient ignores its existence. In our opinion, a local reaction extending over a period of time greater than twenty-four hours is caused by some other agent than the vaccine.

GENERAL REACTION

Frequency.—In this series of inoculations a systemic reaction was noted in about 7 per cent., and was most frequent after the second dose, next after the first and of least frequency after the third dose. It consisted of a temperature of about 100 F. and malaise; these were consistent and, in exceptional cases, diarrhea, insomnia and nervous symptoms, herpes labialis and, most rare of all, an acute general erythema with an occasional spot not unlike a "rose spot."

The other symptoms noted are irregular in character and vary in duration. Insomnia and nervous symptoms may last for forty-eight hours, but as a rule are over within twenty-four hours.

In this regiment provision was made for these reactions by excusing the men treated from all duty for twenty-four hours after inoculation and instructing them to avoid alcoholic drinks, muscular exertion and exposure to the sun, for it is our belief that failure to observe these precautions after inoculation will, in a large percentage of cases, result in a sharp reaction which can be prevented by strict observance of these instructions.

During this encampment at San Antonio, Texas, of 12,000 men approximately, there has occurred one case of typhoid fever. This man was a civilian teamster and had never been inoculated against typhoid.

With this case of typhoid and the undoubted presence of typhoid carriers in this command, it is our opinion that sanitation alone would never have kept this command free from an epidemic of typhoid fever, and that its present typhoid-free condition has been brought about by the energetic employment of vaccine prophylaxis against typhoid. From a sanitary standpoint, the health record of the present encampment of the United States troops at San Antonio, Texas, has probably never been equaled.

NOTE.—Since this article was written there has occurred in this division an additional case of typhoid fever. This case was in the person of a private of the hospital corps and was of the ambulatory type. This man had had two doses of the vaccine, which so modified the disease that clinically it would not have been recognized, the symptoms consisting only of a little fever and malaise, which lasted for a few days. This additional case and the case previously reported in this paper are cited for the purpose of emphasizing the fact that typhoid fever is present in this camp.

IDIOPATHIC NON-PURULENT ACUTE THYROIDITIS

REPORT OF A CASE, WITH COMPLETE RECOVERY *

HOWARD V. DUTROW, M.D.
ANCON, CANAL ZONE

This case was presented at the sixty-second meeting of the Canal Zone Medical Association, on account of the rarity of this diseased condition of the thyroid gland, at least on the Isthmus, this being the only case diagnosed as such among the records of Ancon Hospital.

History.—The patient was a male laborer, from St. Lucia, aged 30, seven years on the Isthmus, and in fairly well-nourished condition. His father was still living and healthy; his mother had died of senile debility. The patient had never been admitted to the hospital before. He had had rheumatism from time to time; but no attacks of shortness of breath, nor history of previous illness of any kind. His venereal history was negative. Ten days before admission to the hospital, the patient's throat began to swell; two days after the initial onset, the swelling in the region of the thyroid gland became painful.

Examination.—When the patient was admitted, the swelling was not acutely painful to pressure but became so two days later. The mass conformed to the movements of the larynx and adjacent structures during the act of deglutition. There was no dysphagia or dyspnea. There was no pain on firm pressure over the manubrium of the sternum. The swelling gradually increased and a small area of bogginess could be made out on palpation in the median line on a level with the cricoid cartilage. The eyes were negative and the heart's action was slightly accelerated. The temperature was 102 on admission; on the morning of the following day it was 99 and in the evening went up to 101½. For the next ten days it ranged from 100 to 101½, then it dropped to normal and remained so until the date of the patient's discharge. The buccal cavity and pharynx were found to be negative. Laryngoscopic examination of the larynx showed nothing except a slight congestion of the mucous membrane. There was no impairment of the voice. The patient had a leukocytosis of 12,000; chemical and microscopic examinations of the urine were negative. The condition of the blood was not ascertained in this case. A differential diagnosis has to be made between Ludwig's angina, cervical adenitis, mediastinal, peritracheal and periesophageal abscess.

Operation and Treatment.—An exploratory incision was made in the median line over the isthmus of the gland and both lobes explored for the presence of pus but none was found. A small amount of colloid material mixed with blood exuded. A small gauze drain was inserted which was removed after forty-eight hours and the wound allowed to close. Ice in an ice-cap was used constantly as a local application, while the constitutional treatment consisted of brisk purgation together with tonics and a full nutritious diet.

Course.—The swelling gradually subsided and the patient made a complete recovery, except for a slight discoloration of the skin over the gland. Whether he will have any subsequent local or general manifestations as a result of the acute inflammatory process in the gland, I am not prepared to say. He had no signs of myxedema when he left the hospital.

Acute thyroiditis may be purulent or non-purulent. When pus is present it is usually in the form of small abscesses scattered throughout the gland. In this case, no apparent cause could be found, either local or constitutional. The etiology of this form of acute thyroiditis is in most cases a mooted question as is the physiology of the gland itself.

I have reported this case because I thought it would be of general interest to the profession, as well as to those who are engaged in special work pertaining to the thyroid gland and its allied pathologic conditions.

* From the Eye, Ear, Nose and Throat Department, Ancon Hospital. This case is reported with the approval of Colonel W. C. Gorgas, Chief Sanitary Officer.

AN UNUSUAL FOREIGN BODY IN THE INTESTINE

EDWARD H. MOSS, M.D.
CINCINNATI

The following interesting case is reported, not only as a curiosity, but also as showing to what an extent the human digestive tract can accommodate itself to a large foreign body for so long a time.

In November, 1910, Mrs. H., aged 27, was placed in a private sanatorium, suffering with acute mania, in which she was very destructive, tearing up everything within her reach. The patient afterward told me that the nurse tied her feet with a small piece of rope and that she chewed through it and swallowed it so that the nurse would not know what she did with the rope. She also chewed her gown, bed sheeting and hair and swallowed them.

She left the institution in December, 1910, cured, and did not suffer any inconvenience, having a bowel movement daily, although she states that at times she had a little pain in the pit of the stomach.

Sept. 13, 1911, she came under my care for a gastro-intestinal disturbance following the eating of canned lobster, in which she vomited every few minutes matter consisting mostly of water and a little bile. The temperature was 100, pulse 96. Examination of the abdomen revealed nothing abnormal.

September 14 the vomiting still continued and the bowels were very much distended with gas. The temperature was normal and pulse 86. Examination showed no evidence of appendicitis. I directed the administration of a high enema of soapsuds and turpentine which was repeated an hour later. After the second enema the patient evacuated a small, clay-colored, watery stool with a good deal of gas.

September 15 patient had ceased vomiting and taken some light nourishment. As her bowels had not moved, her stomach being settled, I gave her four drops of croton oil in milk, and ordered the nurse to give a high enema within two hours if the bowels did not move. Following the enema the patient had a copious, watery stool, blackish in color and very foul. On the 16th and 17th the patient was comfortable and ate light diet; the pulse and temperature were normal and she was up and around.

September 18 at 9 o'clock she commenced to vomit again and complained of "awful bearing-down pains." Her bowels were moved by a high enema of Epsom salts (stool very loose, black and foul). She complained of intense pain all day.

September 19, about 11:30, after the nurse had given a high enema of Epsom salts, the patient started to use the vessel, when she screamed out with pain and told the nurse that something was cutting her rectum. The nurse reached down and found a piece of rag protruding from the rectum, on which she started to pull, and a mass came down into her hand. She put her fingers up into the rectum and felt another mass which was connected with the first. She started to pull this mass and the patient fainted. The nurse pulled the rest out and placed the patient in bed, and then called me. On my arrival we examined the mass and found that the specimen, filled with fecal matter, weighed 2 pounds and 8 ounces. After washing, the mass was found to consist of hair, rope and cloth which the patient had swallowed during her maniacal attack nearly a year before.

I have looked up a good deal of literature on this subject but can find no record of any case in which the patient retained so large a mass in the intestines for so long a time and then passed it per rectum. There are instances in which obstruction has occurred from foreign bodies in the intestines necessitating operation.

18 West Seventh Avenue.

WOODY PHLEGMON OF RECLUS

E. J. PANZNER, M.D.
DETROIT

The patient was a woman, aged 25, in good general health, who had been married two years and had no children. Past history was negative, except for a number of attacks of follicular tonsillitis. Two days following an attack of pharyngitis she noticed a swelling develop in the cervical region of her neck. This swelling became larger and gradually extended up the left side of the neck, just posterior to the mastoid process, whence it traveled anteriorly to the submaxillary space and forward almost to the trachea. The mass was very hard and, except for a very small area which was soft and fluctuating, had a board-like feeling on palpation. The skin was not discolored at this time, nor was it adherent to the lump beneath. There was no pain, no rise in temperature, no dyspnea, in fact nothing, either subjective or objective, except the swelling referred to. I saw the patient one month later and the same condition prevailed. This time an aspirating needle was introduced into the necrotic focus, but no pus escaped. The Von Pirquet test was tried for tuberculosis but proved negative. Actinomycosis and sarcoma of the skin were excluded. A diagnosis of woody phlegmon or *Holz-Phlegmon* (as it is known in Germany) was made. The board-like mass was deeply incised, and a small quantity of pus escaped. A drainage-tube was introduced and retained for two weeks, but pus discharged slightly. This condition prevailed for four months, during which time the mass became smaller and softer, the skin bluish, and pus discharged in a small amount from several sinuses, whereupon recovery became uneventful.

The literature of this disease is very meager. Reclus was the first one to report this peculiar condition in 1893, and since then a number of similar cases have been put on record. Recently, Powers of Denver reported a number of cases.[1]

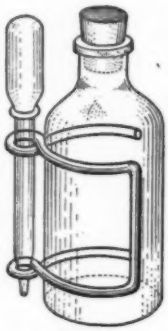
1. Powers, Charles A.: Woody Phlegmon of the Neck (Reclus), THE JOURNAL A. M. A., July 1, 1911, p. 365.

Credulity.—"In fact, we are all credulous on subjects of which we have no actual knowledge. . . . A young physician, or surgeon, on the point of commencing practice, having read in a medical journal a statement of a wonderful cure produced by some new medicine, may not doubt it to be true; while a more experienced practitioner will say, 'It may be so; but, according to my observation, in nine cases out of ten such stories prove to be without foundation.'"—Sir Benjamin Collins Brodie, 1842.

A NEW MEDICINE-DROPPER CLIP

PERCY R. WOOD, M.D.
MARSHALLTOWN, IA.

My first medicine-dropper clip did not prove satisfactory. The pipettes on the market vary so widely in caliber that they will not fit any single loop of standard size. When the pipette is too small the tip rests on the table, exposed to infection and displacement; when too large it cannot be inserted into the loop or removed without undue effort. Moreover, the single clip does not cling securely to the vial, besides being too difficult and expensive to manufacture.



A new medicine-dropper clip.

I have now contrived a clip, illustrated herewith, which overcomes these objections. It can be made by any one with the aid of a bit of wire and a pair of pincers, and will fit a bottle of any size. There are two loops, the top one sufficiently large to engage loosely a pipette of any size, while the lower one engages and supports the tip. The pipette can be easily removed and replaced.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLE HAS BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. ITS ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES."

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

FERMENTDIAGNOSTICUM.—Solution of Glycyltryptophan, Kalle.—Fermentdiagnosticum is a specially prepared solution of glycyltryptophan for use in determining the presence of a peptolytic ferment.

Actions and Uses.—Glycyltryptophan is decomposed in the presence of certain ferments into tryptophan and glycocoll (amino-acetic acid). The presence of tryptophan is determined by the characteristic test for that substance. If tryptophan is found in the solution after incubation with a suspected solution (stomach contents) it is concluded that a peptolytic ferment was present in the substance tested.

As peptolytic ferments are not present in stomach contents except after regurgitation from the intestine, or in the presence of cancer, it is claimed that fermentdiagnosticum may be applied as a reliable test for the diagnosis of cancer in the stomach.

Dosage.—Each bottle contains a quantity sufficient for one reaction, the solution being covered with toluene for preservation. The material to be tested should be examined for bile and blood and tested with bromine water or bromine fumes for the presence of tryptophan. If these tests give negative results, the stomach fluid is suitable for the application of the fermentdiagnosticum.

The bottle is filled to the mark with filtered stomach contents and placed in the incubator for twenty-four hours. It is then taken out and 2 to 3 c.c. of the solution underneath the toluene layer are removed and tested for the presence of tryptophan.

Manufactured by Kalle & Co., Biebrich a. Rh., Germany (Kalle & Co., Inc., New York). German trademark; no U. S. patent or trademark.

Therapeutics

ANESTHESIA AND ANESTHETICS

(*Continued from page 1697*)

CHLOROFORMUM U. S. P.

Description.—Chloroform, $CHCl_3$, is a heavy, clear, colorless liquid, with a sweetish characteristic odor and taste, slightly soluble in water, but mixes in all proportions with alcohol and ether. It is a very remarkable solvent; is very volatile; and its vapor is heavier than air. In the presence of light and air it undergoes slow decomposition with the production of irritating substances, and consequently it should be kept in tightly stoppered bottles.

Chloroform was discovered in 1831, by Samuel Guthrie, of Sacketts Harbor, N. Y., and about the same time by Soubeiran, in France, and Liebig, in Germany also.

It was employed as an anesthetic by Sir James Y. Simpson, of Edinburgh, on Nov. 4, 1847, and soon afterwards he published a report of fifty successful administrations. Its apparent advantages over ether caused it for a while to supplant the latter in a large part of the world, New England being the most important exception.

Local Action.—On the skin its action is similar to ether though more intense, and vesication is more easily produced.

Systemic Action.—Internally its action is similar to that of ether with the following slight differences: It is less depressant to the respiratory center, and it does not increase the arterial tension, as it is not a stimulant to the heart. On the contrary, it has a direct depressant action on the heart muscle.

Therapy.—Its principal use is by inhalation for surgical anesthesia. Locally it is used as a counter-irritant, and as such is an ingredient of several liniments. Chloroform has been used as a styptic, and a 2 per cent. solution in sterile water has been found efficient where the bleeding vessels were small.

Internally it acts as a carminative similar to the volatile oils. Chloroform inhalations to the point of anesthesia, lasting a few minutes, has been found to greatly modify subsequent paroxysms in whooping-cough. Whether its antiseptic property is the reason for such improvement, or whether the irritability of the nervous system is for some time reduced, has not been determined. If a patient with whooping-cough had paroxysms that were dangerous for the welfare of his blood-vessels and heart, certainly chloroform should be resorted to. On the other hand, it should not be forgotten that a patient must remain quiet for some hours after chloroform anesthesia. As a routine treatment, therefore, chloroform should not be used, probably, in whooping-cough.

Official Preparations.—*Aqua chloroformi*, chloroform water. Dose 15 c.c. (or ½ ounce), a tablespoonful in cracked ice. This is sometimes used as a menstruum.

Linimentum chloroformi, chloroform liniment, chloroform 30 per cent., soap liniment 70 per cent.

Emulsum chloroformi, emulsion of chloroform, chloroform 4, expressed oil of almond 6, tragacanth 1, water to 100. Dose, 10 c.c. (or 2 fluidrams), 2 teaspoonfuls.

Spiritus chloroformi, spirit of chloroform (chloric ether), chloroform 6, alcohol 94 (strength 6 per cent.). Dose, 2 c.c., or 30 minims.

CHLOROFORM NARCOSIS

Chloroform has been extensively used as an anesthetic, in Scotland, where it was first used by Simpson, in England, Ireland and throughout Europe. It has maintained its popularity with very many experienced surgeons in spite of the fact that it has been accused of having produced many more deaths than are produced by ether, which latter anesthetic, on account of its reputation of greater safety, has been especially used in the United States, although chloroform has enjoyed moderate popularity in the south and west.

The knowledge of the use of chloroform as an anesthetic has been in recent years systematized through the work of the special Chloroform Committee of the British Medical Association, which, having been appointed in 1901, made its final report to that association in 1910. To that committee the profession is indebted for the establishment of many important facts in connection with chloroform anesthesia. When inhaled into the lungs with the air in a certain definite proportion it is taken up by the red blood corpuscles, and perhaps also in part by the protein of the serum, with which it is held in unstable combination, and is carried to all parts of the body. On the nervous system it acts primarily on the higher centers of the brain. It does not act on all parts of the nervous system equally, and it is this fact which makes it useful as an anesthetic, for if its primary effect was equally strong on the centers of respiration as on the centers of intellection and sensation, it would not be available as an anesthetic for operative surgery. It passes from the air in the lungs to the blood in the capillaries, and with equal facility passes back again from the blood to the air of the lungs when that does not contain chloroform. In this way the chloroform is quickly and readily eliminated from the body when its inhalation is discontinued.

When too large a dose is administered at first, there is stimulation of the vagus center and there is danger that this will cause immediate cessation of the action of the heart. Consequently, it is an inviolable rule that a small quantity of chloroform should be administered at first. This should be gradually increased until the patient is fully anesthetized. After this has taken place, the amount administered should be generally lessened, else it is likely to produce disastrous results.

Chloroform acts on the heart by reducing the strength of the ventricular contractions, and it has been shown that the strength of the heart is most diminished a few moments after the anesthetic has been begun. Later the heart muscle recovers and remains improved during the subsequent careful anesthesia. This emphasizes the danger of heart failure during early chloroform anesthesia. The progressive fall of blood-pressure under chloroform is largely due to vasomotor depression.

The committee already mentioned, through its various members and co-workers, determined that the proper strength of chloroform which should be inhaled in order to produce anesthesia is 2 per cent. This, however, should not be used at the beginning. The strength at first should be 1 per cent., which should be rather rapidly increased until 2 per cent. is used. After the patient becomes fully anesthetized, this may be reduced to 1.75 to 1.5, or even to 1 per cent., as the circumstances demand.

In order to obtain this exact percentage of chloroform in the inspired air a number of inhalers have been devised, all of which have some merit and perhaps all have some disadvantage. It will readily be seen,

however, that only by the use of suitable apparatus can the percentage of chloroform in the inspired air be definitely determined and adjusted. Consequently, it is one of the things which must be worked out in the future to obtain an apparatus which is practicable to use and which will enable the exact proportion of chloroform to be determined and administered.

Of course the same facts are applicable to chloroform when an inhaler is not available. Under these circumstances the anesthetist must aim to administer the chloroform as nearly as possible as above suggested. This can probably best be accomplished by an ordinary wire inhaler on which is stretched a single layer of stockinet or a loosely woven flannel. This should be applied closely to the face of the patient, after the skin has been lubricated with petrolatum, and the chloroform dropped on this flannel, a single drop at a time, the drops being repeated with a frequency about equal to normal respiration. When chloroform is administered in the method described, anesthesia should be completed in from 8 to 12 minutes.

A large proportion of the deaths from chloroform have occurred while the anesthesia is being induced, and have probably been due to a too high percentage of chloroform in the air inhaled. Undoubtedly in many cases as much as 4 or 5 per cent. of chloroform has been mixed with the air, and this amount is certainly dangerous.

Much discussion has been held in regard to whether deaths from chloroform are due to paralysis of the heart or of the respiration. When a very strong vapor is administered at first, as has already been stated, the heart may stop through excessive stimulation of the vagus center. If the amount administered is not sufficiently strong to produce death in this way, it may produce it by direct action on the heart muscle. When excessive amounts of chloroform are administered there is a very notable diminution of the blood-pressure, and this together with the impaired action of the heart is likely to cause paralysis of respiration. In other instances where the action of the heart is not entirely stopped the lessened blood-pressure in connection with the direct action of the chloroform on the respiratory center may cause cessation of respiration before the heart stops.

In order to diminish the proportion of chloroform in the air and so to render its administration more safe, it has been proposed to dilute it with alcohol or with ether, or with both, but such admixtures so complicate the problem of the administration of chloroform that it would seem wise to discontinue their use.

The so-called A C E mixture, viz., alcohol, chloroform and ether in the proportion of 1 part of alcohol, 2 of ether and 3 of chloroform, has been many times recommended and has been largely used by some surgeons. It is, however, a dangerous combination, as it causes the anesthetist to use the anesthetic as he would ether, while the danger is that of chloroform. Consequently, the use of this combination should be discouraged.

As it has been noticed that chloroform is given with less danger in warm climates and during summer weather, it has been proposed to administer the chloroform, as suggested for ether, warm rather than cold.

When chloroform is not administered by one of the mechanical regulating inhalers, but by the so-called open method, the chloroform should always be used by the drop-by-drop method, and should never be used by the so-called douche method, i. e., to pour a half teaspoonful or more of chloroform on the flannel of the inhaler, as it is a dangerous practice.

Children usually require a relatively smaller percentage of chloroform to induce anesthesia than do adults, and some thin adults are found to require less than the average amount necessary for anesthesia, while fat patients often require very much more. It has been suggested that the reason fat patients require more chloroform is that the fat tissue in all parts of the body takes up the chloroform, and it therefore requires more to act on the nerve cells and thus to produce anesthesia. Alcoholic patients often require a large amount of chloroform, and consequently chloroform is more dangerous in these patients, they already often having weak hearts.

INDICATIONS FOR THE USE OF CHLOROFORM AS AN ANESTHETIC

1. Labor.
2. Renal or hepatic colic.
3. Convulsions.
4. Very high blood-pressure.
5. Arteriosclerosis.
6. Aneurysm.
7. Renal disease.
8. Lung lesions, such as chronic bronchitis, serious asthma, emphysema, pulmonary tuberculosis.
9. Obstruction to the upper air passages and when ether anesthesia by the rectum is not advisable.
10. Laryngeal irritation or inflammation.

CONTRA-INDICATIONS TO THE USE OF CHLOROFORM

1. Weak circulation: myocarditis, dilatation, fatty heart, a condition of shock after loss of blood.
2. Very long operations.
3. Operations in which the patient's head and shoulders must be raised; in other words, in which the patient cannot be recumbent.
4. Prolonged septic processes, or serious abdominal conditions, as intestinal obstruction, and where there is jaundice.

If a patient must be moved after being anesthetized by chloroform, the head must remain lower than the body and the feet more or less raised during the transfer.

It should be remembered that ether is more or less stimulating to the heart, and when there is fatty degeneration or myocarditis, and perhaps in most cases of valvular lesion, ether should be the choice, and the pulse tension will often improve under its administration.

Chloroform for short operations on children has been the anesthetic of choice, and was largely used for adenoid and tonsil operations. If it was carefully administered, the results were generally good, but a number of fatalities occurred, whether from pushing the chloroform too rapidly in the first stage of anesthesia, or because operations were done in primary anesthesia before the patient was really anesthetized, or because the patient in these operations is often not recumbent, but is simply inclined backward, does not appear. Probably all of these causes produce death. Consequently, ether is generally now used for these operations.

While there is always danger of fire or explosion in using ether after dark when the light is furnished by gas, still it should not be forgotten that in the presence of gas light the vapor of chloroform may be broken up not only into chlorin and hydrochloric acid, but also into an oxychlorid of carbon, phosgene ($COCl_2$), which is a violent poison.

COMPARATIVE DANGER OF ETHER AND CHLOROFORM

Ever since these two anesthestics made their almost simultaneous appearance there has been more or less controversy as to which is preferable and which the safer. The particular indications and contra-indications for ether and chloroform have already been stated. There have been many carefully investigated statistics offered, both early and more recently, and the percentage of deaths from the two anesthetics continues about the same. Doubtless these percentages are unfair to chloroform, because there are ether deaths from bronchitis and pneumonia which are not recorded as ether deaths. Also the statistics are unfair from the fact that a careless or unskilled anesthetizer may use ether with impunity, but chloroform with dire results.

From these accumulated statistics it seems that there is one chloroform death in each 2,000 anesthesias, and one ether death in each 10,000 anesthesias; i. e., chloroform, as used, is five times as dangerous as is ether. Again, however, it should be suggested that the statistics of etherizations generally come mostly from hospitals where the anesthetist is now generally skilled in the art of administering anesthetics, while chloroform is administered for short anesthesias by anyone in any place, and without his having special knowledge of the administration of anesthetics.

DELAYED CHLOROFORM POISONING: POSTANESTHETIC GLYCOSURIA

The completion of the operation and the withdrawal of the anesthetic does not terminate the danger for the patient. While the most common cause of a fatal result following operation is connected with the pathologic process for which the operation is undertaken, in a small proportion of cases a serious illness or a fatal result is due to an unusual action of the anesthetic. This is seen most frequently after chloroform has been administered, but is also observed less frequently after the inhalation of ether, of nitrous oxid, or of ethyl chlorid. Its more frequent occurrence after the administration of chloroform has led to its being commonly designated as "delayed chloroform poisoning." It may come on a few hours after the administration of the anesthesia, or it may not appear for two or three days. It may continue from a few days to a week or ten days, and may end in recovery, but usually terminates in death.

It has long been recognized that glycosuria occasionally occurs in the urine of patients who had been anesthetized by chloroform. It can also occur after etherization, but this is rare. An actual acid intoxication seems to occur occasionally after chloroform anesthesia. This poisoning has been thoroughly described by H. G. Wells, of Chicago (*Arch. Int. Med.*, July, 1908). He thinks that these cases of poisoning may be grouped into two classes. One occurs mostly in children, with the prominent symptoms of vomiting, cerebral excitement, breathlessness, disturbed heart action, with cyanosis and finally coma. The urine shows various acetone bodies, and the breath is sweet. In other words, the condition is one of acidemia, as occurs in diabetes. The other type occurs in older individuals with almost similar symptoms, with the exception that the symptoms are likely to last longer, jaundice may occur, and there is a tendency to hemorrhage. The liver shows marked disturbance, leucin and tyrosin may appear in the urine, and the symptoms may resemble acute yellow atrophy of the liver. The above symptoms may occur within from 10 to 150 hours after the anesthesia. Autopsies have shown the principal disturbance to be in the liver, which shows great congestion and degeneration, somewhat similar to that found in acute yellow atrophy of the liver.

Bevan and Favill (THE JOURNAL, Sept. 2, 1905, p. 691) studied this subject very carefully, and reported that they had found at autopsies that the liver showed fatty degeneration in sixteen cases, acute yellow atrophy in three cases, and no distinct changes in four cases of deaths from chloroform anesthesia. Other organs showed fatty degeneration. Ether can readily cause these disturbances. Predisposing causes to such serious results from anesthesia are diabetes, chronic disease of the liver and kidney, exhaustion from hemorrhage or from starvation, a previous or present severe infection, repeated anesthesias or recent anesthesia, and, other things being equal, the younger the patient.

The frequency of the occurrence of this serious toxemia has not been determined, but Swan, of Watkins, N. Y. (*Arch. Int. Med.*, July, 1911, p. 58), reports an examination of sixteen patients with reference to glycosuria. Ten of these patients had no glucose in the urine either before or after the administration of ether; one had no glycosuria before the administration of the anesthetic, but showed glycosuria in one test afterwards; two had glucose in the urine both before and after the administration; two had no glycosuria before anesthesia, but showed it in considerable quantities after the anesthesia.

Various writers have reported varying proportions of cases in which glucose appears in the urine after the anesthetic, and it is interesting to note that P. B. Hawk, of Urbana, Ill. (*Arch. Int. Med.*, July, 1911, p. 39), reports that in dogs glucose constantly appears in the urine after the administration of ether, unless the dogs have been previously starved, and the glycogen of the body has for this reason been more or less used up.

As this poisoning appears to be an acidemia, a prophylactic measure would certainly be not to have the patient long starved before the administration of the anesthetic; perhaps he should receive sugar in some amount a few hours before the operation. Also, as soon as possible after the anesthetic, oatmeal gruel or some similar starch should be given. If symptoms of such poisoning appear, solutions of dextrose should be administered, either by the mouth or by the rectum, and alkalies like sodium bicarbonate are indicated. It seems, however, that most patients who actually develop this condition die. In other words, the condition is very serious.

From what investigations and observations have shown, it seems that some individuals may have an idiosyncrasy against chloroform, and if such iodiosyncrasy is ever discovered, certainly this anesthetic should never be repeated. On the other hand, in septic processes, and especially in prolonged suppuration where the vitality of the patient has been diminished and the liver is more or less worn out with combating poisons, chloroform should not be used; nor, when there is obstruction in the intestines, or jaundice, and the liver is therefore in serious trouble.

From all that has been said of ether and chloroform, no other conclusion can be drawn than that chloroform should generally be used only in cases in which ether is contra-indicated. On the other hand, as above stated, statistics and general professional and lay opinion seem to be unfair to chloroform. Chloroform when properly administered by a skilled anesthetist has so many advantages over ether that it is a pity that it has come to receive such a bad name.

(To be continued)

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ALIMENTARY BACTERIA IN A NEW LIGHT

It is not necessary to turn back many years to reach the period when marked synthetic powers were regarded as preeminently, if not exclusively, the property of plant structures. To the animal economy was relegated the capacity primarily to disintegrate complex compounds, with the exception of a few isolated examples of synthetic activities. The modern researches in the chemistry of digestion, to mention only one field of study, have placed the questions of constructive reactions in nutrition in a new light. Foodstuffs, once supposed to be absorbed and "assimilated" after only slight preliminary digestive alteration, are now known to be disintegrated in the alimentary tract into relatively simple chemical fragments which are in turn resynthesized into compounds specific for the individual and specially adapted for its nutritive needs. Flesh and blood no longer are vaguely assumed to represent slightly metamorphosed food—they are a product of actual reconstruction from the débris of the alimentary tearing down.

This modern conception indicates how completely digested foodstuffs—in particular, the proteins—can still serve the purposes of adequate nutrition. Numerous experiments have shown that nitrogen equilibrium can be maintained even when mixtures of the amino-acids resulting from complete hydrolytic cleavage of proteins form the sole source of nitrogenous intake. There need be no loss of body protein. Mixtures of this sort have already been administered successfully to man.

If, then, it is true that the animal organism has the power to build up body proteins out of comparatively simple cleavage products resulting from the digestion of food proteins, what is the fate of other similar nitrogenous products which are widely found as accessory constituents of the diet? Such non-protein nitrogenous substances constitute a very large element in the food-supply of the herbivora, in the form of alkaloids, nitrogenous glucosids, amino-acids, amids, phosphatids, nitrates, ammonium salts, etc. They are by no means foreign to the dietary of the omnivora or of man. The question resolves itself into this inquiry: do these non-proteins furnish energy and have they value for the maintenance or production of body protein?

The topics under discussion form the subject of an interesting monograph by Professor Armsby, director of the Institute of Animal Nutrition of the Pennsylvania State College.[1] The investigations there reviewed make it evident that amino-acids and amids, such as ordinarily constitute the larger part of the non-protein nitrogenous constituents of vegetable substances, are catabolized in the animal body. In carnivora and omnivora this type of compound has not yet been demonstrated to be capable of performing the functions of protein. For ruminants the story is different:

"A conversion of non-protein into protein appears to be effected by the microorganisms of the digestive tract. The extent of the conversion appears to be relatively greater in the case of ammonium salts and asparagin than in that of vegetable extracts. The protein formed thus from non-protein seems to be digested subsequently. . . . By means of its conversion into bacterial protein, the non-protein of feeds may serve indirectly for maintenance and also as a source of protein for milk. The limiting factor in the indirect utilization of the non-protein of the feed appears to be the extent to which it can be converted into protein in the digestive tract rather than any inferior nutritive value of the protein thus formed as compared with that originally present in the feed."

Granting that these facts appear to have only a remote relation to the problems of human nutrition, there is food for reflection in the new rôle of the alimentary

1. Armsby, H. P.: The Nutritive Value of the Non-Protein of Feeding Stuffs, Bull. 139, Bureau of Animal Industry, Washington, 1911.

Thanksgiving

NOW, while the land rejoices in the close of a fruitful year, it is the privilege of our profession to join with all sorts and conditions of men in giving thanks for the common blessings of peace, health and prosperity. Ours, too, it is to offer special thanks for benefits vouchsafed to us in particular. For fresh glimpses into the secrets of Nature—for new weapons against the ancient foe, disease—for the inspiration of heroic lives, whether spent in the blaze of publicity or in obscure and lonely ways, and of noble deaths, some bravely challenged in the line of duty, others peacefully crowning a life-time of splendid work—for joy in the exercise of faculties trained to the service of high endeavor—for the opportunity to prove the faith that is in us, if need be, by surmounting hardship, danger and temptation—for all these let us give earnest thanks—and thanks not least for the moment of clear vision that shows their worth. It will often enough be obscured by daily vexations and trivialities. Before we turn to the holiday feast, therefore, let us not forget to light up the coming year with candles of true thanksgiving for the year that is past.

bacteria thus portrayed. Here we find them, endowed with synthetic powers like all plant forms, transforming the less valuable food components into real protein which in turn serves the needs of the organism. There are additional facts accumulated of late which speak for the beneficial cooperation of bacteria in alimentation, tending to place some of these parasitic invaders in a light less objectionable than heretofore.

MEDICINE AND SOCIOLOGY

In a thoughtful address to the graduating medical class of Chicago University, Prof. C. R. Bardeen emphasized the fact that with the application of a scientific sociology to the needs of mankind the importance of medical science will come more and more to the fore. He feels that this relation has not been sufficiently recognized hitherto, either by medical men or by sociologists. On the one hand, medical problems are at bottom social problems and are to be wisely solved only by those who have some knowledge of social science. On the other hand, the complex conditions of modern life have developed social problems which demand above all else the intelligence of men broadly trained in medicine. He speaks, of course, from the standpoint of the educator and asserts that our medical schools will recognize more and more that the training of public health officers is a duty equally important with that of training practitioners of medicine.

Bardeen says that much weakness and inefficiency in the treatment of disease by physicians is due to a too narrow preliminary training, to a too restricted attitude, to a selfish, competitive, unprogressive individualism, archaic and out of place in modern highly organized society. Many of the worst evils of our present-day civilization — dirt, ill health, despondency, pauperism and crime—are due to lack of proper education. In the education of the public in these matters those trained in medicine should act as guides and counselors. Health of body and mind should be recognized as of first importance to the community. As Havelock Ellis remarks, it is the chief element of rottenness in our civilization that they are not so recognized to-day; we postpone laying the foundations of our social structure in order to elaborate its pinnacles. We have not yet learned that a great civilization is ill built up on the bodies of men and women enfeebled and distorted by overwork, filth and disease. A vast amount of preventable disease exists, such as typhoid fever, small-pox, the diseases due to defective milk- and food-supplies, etc., for which there is no valid excuse. A start in the right direction has been made in the public inspection of schools, in the more or less effective efforts to establish efficient municipal boards of health—which are greatly handicapped through the reluctance of the legal authorities to grant sufficient funds for health purposes—in the establishment of public sanatoriums for the control of tuberculosis, etc., but what is needed is more of the splendid health work done by our government in Cuba, the Canal Zone and Manila. Bardeen insists that we need a national health bureau and in each state, district or municipality, thoroughly competent health officers. Physicians should take a more active interest and should become the leaders in such movements. In Wisconsin in a "progressive" legislature, bills relating to instruction in hygiene and to medical inspection in the public schools failed to pass because a handful of Christian Scientists exerted more influence than a medical profession of 3,000.

Three things, then, are emphasized by Professor Bardeen: the increasingly important relation of sociologic to medical questions; the necessity of training physicians on broad sociologic lines in addition to their medical training in order to meet the requirements, and the necessity for physicians to take the lead in all sociologic movements; and last, the duty of medical schools in their teaching to recognize the demand for properly trained physicians to become leaders in all matters relating to the public health as well as to make them competent physicians for treating individual diseases or patients.

Some medical schools (Pennsylvania, Harvard, Michigan and Wisconsin) have already recognized this demand and have established special instruction along these lines. This movement must eventually extend to all first-class medical schools.

THE CAUSE OF RIGOR MORTIS

For a long time the phenomenon of rigor mortis has been explained on the basis of coagulation of muscular protoplasm. But there are several vital objections to this theory, the validity of which even its adherents have been obliged to acknowledge. Perhaps the chief objection lies in the transitoriness of the process, which by the coagulation theory would have to be ascribed to a re-solution of the solidified albumin. Such solution, of course, does take place during the autolysis of proteids, in which case it gives rise to their cleavage products. But inasmuch as these cleavage products do not occur in any considerable quantity in muscular tissue after the passage of rigor mortis, the coagulation hypothesis will hardly suffice. Again, if the rigor were due entirely to coagulation, it would be reasonable to expect that the production of coagulation of muscular proteid by chemical means would always be accompanied by a proportionate rigidity. This, it is true, does occur in many instances; but several substances are known, among them sodium sulphocyanate and sodium salicylate, which are capable of producing marked coagulation of muscle tissue without causing any degree of rigor. In view of the apparent inadequacy of the coagulation theory, the application of recent developments in the field of colloidal chemistry to the problem is of interest, more particularly since it seems to admit of explanation on this basis.

As is well known, colloids possess to a great degree the property of absorbing whatever fluid they may be in—the so-called process of imbibition. Now, it has been shown that the capacity of a colloid for the imbibition of water is greatly enhanced by the presence of small quantities of acid. And since lactic acid accumulates rapidly in muscular tissue after death, conditions become favorable for imbibition, with consequent swelling and rigidity of the muscular fibrillæ. This explanation was advanced by Meigs[1] quite recently, and has already received elaboration and experimental confirmation at the hands of von Fürth and Lenk.[2] According to this theory, the onset of rigor mortis is quite independent of proteid coagulation, and even is hindered or prevented by the latter process; for the capacity of a colloid for retaining water diminishes with coagulation, so that the disappearance of post-mortem rigidity can be accounted for by the release of the imbibed water on the solidification of the muscle albumin, this latter quite possibly resulting from the still further increase of lactic acid in the tissue. In confirmation of this view, the authors just cited found that hastening of proteid coagulation, as by chemical or thermal means, resulted in an accompanying decrease in imbibition. Similarly, cardiac muscle from a horse, tested at varying periods after death for imbibitory capacity, at first showed this to a marked degree, but later, after the appearance of rigor mortis, it rapidly disappeared. So pronounced was this that von Fürth and Lenk believe that the phenomenon will even have forensic importance for the differentiation between fresh tissues and those that have been preserved on ice.

Besides serving to explain the passage of post-mortem rigidity, the new hypothesis fits in nicely with minor phases of the process. So, for instance, the more rapid disappearance of rigor mortis in warm weather is explained by the quicker onset of coagulation with elevated temperatures. And the fact that rigidity appears more rapidly when death is preceded by severe muscular contractions is accounted for by the accumulation of acid in exercising muscle. So, too, the lack of rigor mortis when muscle is kept in an oxygen atmosphere follows from the established fact that in such circumstances there is no liberation of lactic acid.

According to this view, it is necessary to consider the rigidity induced by high temperatures (50 C. and over) and by most chemical means, as distinct from that following death; for the former, which is permanent, is of course the result of massive proteid coagulation, and so must be differentiated from the other, transient, process. With chemical rigidity induced, for instance, by sodium sulphocyanate, however, the phenomenon is probably essentially similar to rigor mortis, and is presumably caused by increased accumulation of acid in the tissue.

A similar theory of imbibition has been used by Engelmann to explain normal muscular contraction, and it is interesting to note that thus our conception of rigor mortis is again brought to correspond to a certain degree with that of vital muscular activity—a correspondence that was first suggested by Nysten at the beginning of the last century.

1. Meigs: Am. Jour. Physiol., 1910, xxvi, 191.
2. Von Fürth and Lenk: Wien. klin. Wchnschr., 1911, xxiv, 1079.

A RECENT CONFIRMATION IN MAN OF THE RESULTS OF PAWLOW'S EXPERIMENTS ON DOGS

One of the charges made by the opponents of animal experimentation and reiterated in their literature is that the experience gained in the study of animals is rarely applicable to the conditions pertaining in the human organism. Indeed, it is not entirely unusual to find this belief entertained by physicians who are not familiar with the contributions made to medicine by such experimental studies.

The classic investigations of Pawlow on the factors concerned in secretion along the alimentary tract and in the conditions favorable to digestive activity—studies which won a Nobel prize for this brilliant Russian investigator—are widely known, and are even quoted in popular literature. Yet one sometimes hears the validity of the application of this work to human beings questioned because the fundamental observations were made on dogs.

It is interesting to note, therefore, that Pawlow's chief conclusions have been confirmed in many of their details by the chance observations made on man in those unfortunate cases in which accident or disease has furnished an "experiment in Nature." The establishment of a gastric fistula in man for the relief of a stenosis of the esophagus is no longer a surgical rarity. What accident did for Alexis St. Martin, the famous patient of Dr. William Beaumont in his pioneer studies on gastric digestion in man, has since been repeated of necessity as a surgical procedure.

Among the latest reports of such cases are two from Italian clinics,[1] in which the patients have become subjects of scientific investigation. They have demonstrated two phases of gastric secretion in man precisely as these have been ascertained in the case of dogs. The early phase of secretion appears about five minutes after the beginning of the psychic excitation; the second and more lasting phase ordinarily begins in the second half hour after the ingestion of food and persists for several hours. In normal gastric digestion, then, the first incitement of secretory response and the gastric juice produced during the first hour or two are in good part attributable to the psychic excitation. In the subsequent period, secretion is due to local causes acting directly within the stomach itself. Mantelli was even able to demonstrate on his patient that intense pain or "psychic traumatism" may produce an immediate and prolonged

1. Di Cristina and Natale: Ann. di clin. med., Palermo, 1910. Mantelli: Gior. d. r. Accad. di Med. di Torino, 1910.

inhibition of gastric secretion—a fact which clinical experience abundantly verifies.

Such results, closely paralleling the comparable observations on animals, only tend to lend further emphasis to the value of animal experimentation, which has frequently been dwelt on in these columns.

SCARLET FEVER IN APES

The diseases regarded as exclusively human in character have diminished greatly in number during recent years, and one by one those that remain are being shown capable of animal inoculation. Of those resisting laboratory experimentation most obstinately, scarlet fever has long occupied a foremost rank, and the apparent success of Landsteiner, Levaditi and Prasek[1] in conveying this infection to anthropoid apes is to be viewed with much satisfaction.

Numerous investigators for some time have busied themselves with attempted inoculations of the lower primates, and while some have believed themselves successful, the majority have reported entirely negative results, and the data of the remainder have been of doubtful value. Just how great an amount of work of this sort has been done it is impossible to say, as many investigators do not consider the publication of negative findings as important. This in some ways is rather unfortunate, especially when the experiments have been conducted with great care and on a large scale. It is significant, however, that Landsteiner and his co-workers themselves, before obtaining what is apparently a successful inoculation of one of the higher species, failed to infect thirty-five specimens of lower apes.

The series of experiments in which at last positive results probably have been obtained was performed on chimpanzees. These animals were inoculated both by applying throat swabs from scarlet fever patients to the pharynx, and by injection of blood from such patients. The throat inoculations were in all instances repeated several times, and in one of the positive cases the injection of blood was also repeated, and an emulsion of cervical glands from a fatal case was given subcutaneously also. Two of the four animals so tested gave what apparently was a definite scarlet fever reaction. After an incubation period of two to three days, the animals sickened, underwent a rather abrupt rise of temperature, suffered from a severe angina, with ulceration of the tonsillar surfaces and the formation of a false membrane, and showed a cutaneous scarlatiniform exanthem; this was generalized in one case, and in the other was somewhat localized about the site of injection of the glandular tissue. Both animals died five or six days after the first symptoms, and on necropsy, the lesions of the throat, lymph-glands and skin bore a striking resemblance to those of human scarlatina. In two more cases, an angina like that of the others came on after a similar short incubation period, but neither animal gave any evidence of cutaneous eruption. Since cultures from the blood of patients whose cases ended fatally showed a streptococcus septicemia, attempts were made to produce scarlatinal symptoms in both chimpanzees and lower apes with streptococcus cultures alone. All resulted negatively, although strains of streptococci, isolated both from the infected apes and from human patients, were used.

As is acknowledged by the investigators themselves, their apparently successful inoculations are still too few in number to warrant any extensive conclusions being drawn from them. Nor were the experiments designed for any purpose other than a possible general demonstration of the inoculability of the primates with scarlet fever virus. The conclusion that streptococci play the rôle of merely secondary invaders in scarlatina, however, would seem reasonable, in view of the fact that the streptococci alone failed to cause anything even remotely resembling the specific infection. At the same time there is room for other interpretations.

1. Ann. de l'Inst. Pasteur, 1911, xxv, 754.

Current Comment

AN ATTEMPT TO SIDE-TRACK UNWELCOME ADVICE

The physician is often amused, sometimes vexed, and occasionally hindered in the course of treatment he is carrying out, by plausible advice given to patients by well-meaning friends. A physician sends us a copy of a placard which he found displayed in the home of a newborn babe under his care:

> Any lady who has ever raised a child, or lived within 1 mile of where one was raised, will please relate the conditions to us, making any suggestions you can regarding the care of mother and child, as our nurse has only had seven years' experience; besides our doctor didn't know his business. We hereby agree to use any and all remedies suggested.

On first reading this placard, the physician was slightly embarrassed, not recognizing it as sarcasm, but the attitude of the family quickly assured him that he had their entire confidence, and that he was not to be interfered with in doing his best for mother and babe.

THEORETICAL VS. PRACTICAL AID TO HYGIENE

A recent number of the *Bulletin of the Chicago Board of Health* says, sententiously reiterating a truism, "Cleanliness means comfort; dirt, discomfort." In the same issue it quotes from *Modern Sanitation* to the effect that perhaps with many persons the matter of bathing is really more a matter of esthetics than of hygienics, for "it is all very well to take a morning tubbing when we can slip from a snug bed into a bright, warm, inviting bath-room," but possibly not many of us would insist on such scrupulous cleanliness if, like the less fortunate dwellers in our slums, "we had to carry water from a distant hydrant, bathe without privacy in a cold room and then carry the water to a distant receptacle to be emptied," more especially if we were undernourished and anemic and therefore doubly sensitive to cold and expo-

sure. There may be something in the contention that bathing, like other good personal habits, is often not so much a proof of innate superiority as of convenient environment and that, if the two classes were to exchange environments, the former slum-dwellers would become devoted to the daily morning bath, while the bathing classes would slip back to the level of the great unwashed. In other words, hygiene sometimes needs not so much to be extolled as to be made practicable.

A NEW POINT OF VIEW WITH REGARD TO THE CONSERVATION OF NIAGARA FALLS

It is common to declaim over the encroachments of business threatening the destruction of Niagara Falls, but a correspondent of the *Scientific American* takes the opposite point of view and makes a novel proposition. He suggests that much good would come to humanity by allowing this great cataract to work out its board and lodging. He suggests diverting the falls entirely for a period long enough to build a uniform level edge of concrete or vanadium steel, so that the beauty of the falls could be restored from shore to shore with the use of only as much water as necessary. He estimates that one-third of the water which now goes over the falls would be sufficient; the remainder, diverted through power-houses, would provide an immense amount of energy, giving employment to many people, and reducing the price of the necessaries of life. It would bring a good revenue to the state, and would prevent the great waste of energy which seems to trouble this correspondent.

THE IRREPRESSIBLE BENZOATE OF SODA

In a recent editorial[1] discussing the "Expert Opinion of the Royal Scientific Deputation for Medical Affairs Regarding the Use of Benzoic Acid and Its Salts for the Preservation of Food," which was received by the United States government from the American Consulate General of Berlin, the following statement was made:

"Of the decision of the United States referee board these German scientists say:

> "'The series of experiments in this connection made by the American scientists are of too short a duration and the results coupled with certain limitations so that they cannot be regarded as demonstrating the unconditional non-injurious nature.'"

A member of the referee board writes, protesting that this quotation with its introductory statement gives an entirely wrong impression of the attitude of the German scientists toward the referee board. Our correspondent is of the opinion that the sentence quoted had reference, not to the whole series of experiments conducted by the referee board, but only to that series carried out to determine the effect of *large* doses of sodium benzoate. In going over the report with this criticism in view, we are not at all convinced that the authors of the report intended to limit their statement in the way that has been suggested. In order, however, to avoid an appearance of unfairness, we reproduce the entire paragraph of which the closing sentence only was previously quoted:

> "Summarizing, it may be said that the benzoic acid and the benzoic acid natrium [sodium benzoate] only exercises a poisonous effect on the organism after relatively large doses. From the regular occurrence of hippuric acid (the pairing product of benzoic acid) in the human urine it is to be assumed that small quantities of benzoic acid salts [sodium benzoate] which originate in vegetable food or come into existence by oxidation from constituents of this food, circulate in the blood. From this, as well as from the experiments of the American commission, one can draw the conclusion that quantities up to about 0.5 gram of benzoic acid may be taken daily in small doses without injury to the human body. Whether larger doses (quantities of several grams) could be borne for a longer period by human beings without evil effects can at present not be answered with certainty. The series of experiments in this connection made by the American scientists are of too short a duration and the results coupled with certain limitations so that they cannot be regarded as demonstrating the unconditional non-injurious nature."

Whether the last sentence of this paragraph (which was quoted in the previous editorial) refers, as our correspondent says, only to the sentence immediately preceding it or to the entire paragraph, we cannot say. In view of the conclusions reached by the authors of the report, it seems doubtful that they intended to limit their criticism of the duration of the referee board's experiments only to that series which dealt with large doses of the chemical. Of course, it is useless to discuss such a question. The only rational way of settling it is to ask the authors themselves exactly what they meant. This we have done. Our correspondent also is of the opinion that the Berlin report expresses the same opinion as did the referee board regarding the harmlessness of small doses of benzoate of soda. The conclusions reached by the Royal Scientific Deputation for Medical Affairs do not, we believe, bear out this statement. As was shown previously, it was unequivocally stated that these experts held "that the use of benzoic acid and benzoic acid salts for the preservation of food should not be permitted." This opinion was followed up by the statement: "Even if small doses of the same may be considered harmless for the human organism there is still a danger that with the addition of these substances to the various foods and drinks, on the whole quantities would be daily consumed which would be injurious to the organism." It seems probable that if these men really held that small doses of sodium benzoate were harmless they would hardly have said *"Even* if small doses of the same *may* be considered harmless . . ."; they would rather have said *"Although* small doses of the same *are* harmless," etc. From a practical standpoint —that is, so far as the health of the public is concerned —the point raised by our correspondent is rather an academic one. The important point and the one that was made very plain in the previous note on this subject was that the Royal Scientific Deputation concluded that sodium benzoate should not be permitted in foodstuffs. It is only fair to call attention in this connection to the fact that the referee board had nothing to do with formulating the rules governing the use of sodium benzoate in foodstuffs in the United States. The board was merely asked to determine whether sodium benzoate was or was not harmful in certain quantities. After this question was answered, it was left to men with no scientific training to interpret the findings of the board. The extremely foolish ruling which the government officials succeeded in evolving has already been discussed.

1. THE JOURNAL A. M. A., Nov. 4, 1911, p. 1541.

TEETH NOT A LUXURY

False teeth are a necessity, not a luxury, and a husband is legally bound to furnish them for his wife, if she needs them. This is not the opinion of a medical or humane society, but the solemn verdict of the Supreme Court of Wisconsin.[1] Unless an appeal is taken to the United States Supreme Court, on the ground that this decision deprives the husband of life, liberty or property without due process of law and therefore unconstitutionally, this pronouncement will stand as the law of the land. It is doubtful if there is any other state which has thus safeguarded the rights of its feminine citizens. Married women in need of teeth should at once move to Wisconsin.

A DISGRACE TO THE PROFESSION

The activities of the physician often are not limited to the practice of his profession. We frequently chronicle his success in literature, in statecraft and in other vocations. If a physician links his name with infamy, the disgrace of that infamy cannot fail to be most keenly felt by the upright members of the profession. It is deeply to be regretted that an instance of the latter kind must now be recorded: In the war on vice in Chicago, orders recently went forth to clean up a certain main thoroughfare leading from the down-town district out to the residence part of the city. A protest against making the houses of prostitution move away from that street was laid before the mayor by a committee of "reputable" local business men (or so they styled themselves; as they refused to give their names or occupations, it is impossible to say what businesses were represented). Sad to relate, according to a report in the newspapers, the spokesman was recognized as a physician formerly in the service of the city. It is a consolation to record, in passing, the manly reply of the mayor that the order had gone forth for the benefit of the decent people of the city and that men who would stoop so low as to make such a request did not deserve any consideration from the decent citizens of Chicago. Although a physician might have so degenerated as to look with indifference on these haunts of vice, it is hard to understand how one could have so lost sight of the honor of his profession that he could personally advocate the retention of the houses of prostitution, and thus cast disgrace on himself as a man, and on the profession of which he is a member.

SURGEON-GENERAL WYMAN

By the death of Surgeon-General Walter Wyman[1] the nation has lost a faithful administrative officer who had efficiently handled many important problems of preventive medicine. His work was in the main of a constructive character in the highest and most important sense, and that during a period when large questions of public health and preventive medicine were passing through a rapid development. Much of the efficiency of the public health measures of the government service has been due to his genius. His public service has been coincident with the more important development of the Public Health and Marine-Hospital Service to its present state of efficiency. At first this service was concerned practically with little more than the care of sick and disabled seamen and the administration of medical matters in the marine service, but the bureau has now expanded until it includes, besides an efficient quarantine service covering our great and expanding territory, the combating of cholera, yellow fever, plague, hookworm and pellagra, the study of endemic and epidemic diseases of nation-wide extent. It has developed an efficient laboratory and research department and has devised many practical measures for the betterment of the public health, among which may be mentioned the standardization of serums and vaccines, the establishment of sanatoriums for the treatment of tuberculous sailors and seamen in the west, etc. Handicapped as it has been by lack of support from Congress, the Public Health and Marine-Hospital Service has developed on such broad lines that it now represents a public health agency probably second to that of no other nation; greater improvement in the public health service could probably be attained only by the expansion of the present service into the proposed public health department. Surgeon-General Wyman's death is a great personal loss to his many friends and to the medical profession.

1. In the case of Clark v. Tenneson, 33 L. R. A., 426.
1. See page 1778

Medical News

ILLINOIS

Fox River Valley Meeting.—At the annual meeting of the Fox River Valley Medical Society, held in Aurora, November 14, the following officers were elected: president, Dr. Frederick C. Schurmeier, Elgin; vice-president, Dr. William H. Bishop, St. Charles; secretary and treasurer, Dr. William H. Schwingle, Aurora, and member of the program committee, Dr. Edward H. Abbott, Elgin; censor, Dr. Charles A. Potter, Elgin, and delegate to the state society, Dr. James W. McDonald, Aurora.

Honor Aged Practitioner.—The Whiteside County Medical Society held a special meeting in Fulton, November 9, to pay honor to Dr. Charles A. Griswold, who at that time had completed fifty-five years of practice in Fulton, excepting for the three years when he was a surgeon during the Civil War. Dr. Charles E. Parker, Sterling, president of the society, referred to the professional career of the guest of honor, and Dr. William H. Durkee, Fulton, paid a high tribute to the professional ability of Dr. Griswold.

District Society Meetings.—At the annual meeting of the Western Illinois District Medical Society which was held in Pittsfield, the following officers were elected: president, Dr. William E. Shastid, Pittsfield; vice-presidents, Drs. Albyn L. Adams, Jacksonville, and Elizabeth B. Ball, Quincy; secretary and treasurer, Dr. William P. Duncan, Jacksonville. The next meeting will be held in Jacksonville.——The Southern Illinois Medical Association met for its thirty-seventh annual session in Mount Vernon, November 2-3. The following officers were elected: president, Dr. Andy Hall, Mt. Vernon; vice-presidents, Drs. Harry E. Wilson, Centralia, and Dr. Willis E. Lingle, Cobden; secretary, Dr. Charles W. Lillie, East St. Louis (reelected); assistant secretary, Dr. Harry W. Dale, McLeansboro, and treasurer, Dr. James W. Armstrong, Centralia. Cairo was selected as the next place of meeting.

Chicago

Wiley to Speak in Chicago.—The Physicians' Club of Chicago announces that Dr. Harvey W. Wiley, Washington, D. C., will speak before that organization, December 8.

For Improvement of Medical Education in Illinois.—Recognizing the present conditions of medical education, medical practice and medical licensure in Illinois, the Council of

Chicago Medical Society, November 14, passed resolutions to the effect that there was danger that the public might have wrong ideas of the profession in Illinois, and that a commission should be appointed to investigate, to publish findings and to advise any necessary changes in the present laws. The resolutions end with the statement that the purpose of the work of the Commission is "that organized medicine of the country and state may arouse itself for the good of the profession and the people."

Personal.—Dr. James Alexander Harvey sailed for Europe, November 7.——Dr. Harold E. Eggers of the Memorial Institue for Infectious Diseases has accepted the appointment of professor of pathology in the Harvard Medical School of China, Shanghai, and will enter on his duties, February 1 next.——Dr. Forrest R. Butterfield sustained a fracture of the leg, November 19, during a playful tussle with Dr. John Higginson, whose left hand and wrist were also injured.——Dr. Leonard W. Lewis has been commissioned as first lieutenant, M. C., Ill. N. G., and assigned to the Eighth Infantry. ——Dr. Bayard Holmes, Jr., has been elected commodore of the Jackson Park Yacht Club.

MICHIGAN

New Hospital.—The physicians of Ypsilanti have organized the Physicians' Hospital Association and have opened a private hospital at 718 Chicago Avenue. They expect to erect a number of shacks on the hospital grounds for tuberculosis patients and will act in cooperation with the Ypsilanti Antituberculosis Society.

MISSOURI

Free Clinic Opens.—A free clinic for the worthy sick poor was opened at the Ensworth Medical College, St. Joseph, October 31. The dispensary is in charge of the faculty and students of the institution, and is open from 7 to 8 p. m. daily.

Personal.—Dr. Charles T. Dusenbury, Monett, was operated on for appendicitis at the Sherman (Texas) Sanatorium, November 3.——Dr. John H. George, Leeds, has succeeded Dr. Addison M. Harrison as superintendent of the Jackson County Hospital, Little Blue.

Work Begins on Hospital.—Work is to be started at once on the addition to Springfield Hospital, which is to be erected on the north side of the lot north of the present building. The addition is to cost about $35,000, and the upper floors will be devoted to rooms and wards for private patients.

Infirmary Needed.—A petition has been circulated in Clay County, requesting the county court to hold an election for the purpose of levying a direct tax of 10 cents on the hundred for three years, the proceeds to be used for the erection of a suitable building for the poor of the county. The county court has designated December 16 as the date for this election.

Faculty Society Formed.—At a called meeting of the eighty members of the faculty of University Medical College, Kansas City, a new medical society was organized, known as the University Medical Society, and the following officers were elected: president, Dr. George Halley; vice-presidents, Drs. S. Grover Burnett and F. M. McCallum; secretary, Dr. Albert A. Poorman; treasurer, Dr. Gordon A. Beedle, and censor, Dr. Amos A. Freymann.

Society Condemns Fee-Splitting.—The Jackson County Medical Society, at its meeting November 7, adopted resolutions reenforcing its indorsement of Article 6, Section 4 of the Principles of Ethics of the American Medical Association, and stating that the division of fees shall be counted sufficient grounds for the expulsion of a member, and also condemning non-ethical advertising and consultation with known quacks or charlatans.——The society which owns the lot at Thirty-First Street and Gilham Road proposes to put up a permanent home for the society on this site.

Annual Meeting of Antituberculosis Association.—At the annual meeting of the Missouri State Antituberculosis Association held in Jefferson City, November 13, Dr. George Dock, St. Louis, was elected president; Dr. Walter McNabb Miller, Columbia, secretary, and Mr. Saunders Norville, St. Louis, treasurer. It was decided to attempt to raise $10,000 or more to carry on the work of the association. The following physicians have been appointed members of the state tuberculosis commission: Drs. George Homan, St. Louis; Julia A. Meyer, St. Louis; Herman E. Pearse, Kansas City; Edward W. Schauffler, Kansas City; Jacob Block, Kansas City; Jacob Geiger, St. Joseph; William A. Clark, Jefferson City, and Frank B. Fuson, Springfield.

Society Meetings.—The Howard County Medical Association, at its annual meeting held in Fayette November 9, elected the following officers: president, Dr. Doke Gentle, New Franklin; vice-presidents, Drs. Thomas C. Richards, Fayette, and Joel Y. Hume, Armstrong; secretary-treasurer, Dr. Charles W. Watts, Fayette; censors, Drs. Charles O. Lewis, Vaughan Q. Bonham; Charles H. Lee, all of Fayette; delegate to the state medical association, Dr. Vaughan Q. Bonham, Fayette, and alternate, Dr. Uriel S. Wright, Fayette.——At the annual meeting of the Livingston County Medical Society in Chillicothe, November 8, the first steps were taken for a stringent campaign against quack physicians and the practice of division of fees. Dr. Arthur J. Simpson was elected president; Dr. Reuben Barney, vice-president and delegate to the state medical association; Dr. Byron N. Stevens, treasurer, and Dr. Haynie M. Grace, alternate delegate, all of Chillicothe.

St. Louis

Additions to Sanatorium.—The Missouri Baptist Sanitarium has completed plans for a new four-story fireproof addition, to be erected on the present site, in front of the old buildings, at a cost of $100,000.

Home for Chronic Invalids.—At a meeting of the directors of the Jewish Home for Chronic Invalids, November 12, Moses and Louis D. Schoenberg agreed to donate a building to the organization, in memory of their parents, at an approximate cost of $25,000.

Tuberculosis Dispensaries.—The St. Louis Society for the Relief and Prevention of Tuberculosis has formulated plans for the establishment of three dispensaries to be maintained by the society; one on the north side, one on the south side and the third in the west end.

Personal.—Dr. Cleveland H. Shutt has been elected hospital commissioner of St. Louis, vice Dr. John C. Morfit.——Dr. Charles E. Bauer, superintendent of the City Hospital, has resigned.——Dr. H. Wheeler Bond, formerly health commissioner, has resumed private practice.——Dr. John A. Calnane was assaulted by a negro, October 6, but fortunately was only slightly injured.——Dr. Isaac H. Cadwallader has been reelected physician in charge of the Missouri Baptist Sanatorium.

NEW YORK

Scarlet Fever Pavilion Opened.—The addition to the Syracuse City Hospital was opened November 13. It consists of a pavilion for contagious diseases built on the unit plan. There are accommodations for about 120 patients.

District Society Meeting.—The annual meeting of the Sixth District Branch of the Medical Society of the State of New York was held in Elmira, October 17, and the following officers were elected: president, Dr. Frederick M. Miller, Binghamton; vice-president, Dr. Herbert W. Fudge, Elmira, and secretary and treasurer, Dr. Luzerne Coville, Ithaca.

Personal.—Drs. Frank P. McMorrow and Thomas H. Halsted, Syracuse, have returned from Vienna.——The following appointments to the faculty of Albany Medical College are announced: Dr. Arthur W. Elting, professor of surgery and clinical surgery; Dr. John A. Sampson, professor of gynecology, and Dr. Edgar A. Van Der Veer, professor of abdominal and clinical surgery.

Academy of Medicine Holds Anniversary Meeting.—Thursday evening, November 16, the New York Academy of Medicine held its anniversary meeting. The address of the evening was made by Dr. James Ewing, New York City, who took for his subject, "The Medical Profession and the Public." His remarks were widely printed by the newspapers and have called forth considerable editorial comment and a number of personal letters to the papers.

Red Cross Christmas Seals.—The State Charities Aid Association which takes charge of the sale of the Red Cross Christmas seals of New York City, is appealing to the school principals in 500 villages throughout the state to assist in the work by organizing local committees to sell the stamps. The sales of stamps in the state outside the city amounted last year to $32,000. It is believed that by this plan the amount will be trebled this year.

New York City

Chapel for Cancer Patients.—At a cost of $90,000, secured wholly by voluntary subscriptions, the Dominican Sisters are erecting a chapel for St. Rose's Home for incurable cancer patients, Manhattan. The institution has accommodation for fourteen patients and last year treated forty-five persons suffering from malignant disease.

College Still Needs Money.—The annual report of Columbia University made public on November 18 shows that the gifts received during the past year amounted to $2,932,655. In discussing the agreement between the Presbyterian Hospital and the College of Physicians and Surgeons, President Butler points out the urgent need of about $6,000,000 in order that the university may carry out its part of that agreement.

Health Department to Close Bakeries.—Dr. Lederle, Commissioner of Health, as a witness before the commission which is investigating factory conditions in that city, said that the health department had been investigating bakeries and that the most drastic remedies were needed to better conditions. From June 22 to October 19, 1911, the department inspected 1,169 bakeries in all boroughs, sixty-nine of these being referred to the State Labor Department, and notices to abate nuisances were sent to 148. Since November 1, fifty bakeries have been declared public nuisances by the Department of Health and ordered vacated. The commissioner suggests that the state law be amended to give the State Department of Labor power over bakeries except in New York City, and under certain amendments to leave the situation here under the control of the department of health.

OHIO

Personal.—Dr. Leeland W. Briggs, Toledo, was severely injured in a collision between his automobile and an interurban car, November 12.——Dr. Frank M. Mitchell, Cambridge, was thrown from his bicycle, November 8, and seriously injured.——Dr. Robert J. Marshall has been elected mayor of East Liverpool.

State Antituberculosis Society Incorporates.—Incorporation papers were filed October 27 for the incorporation of the Ohio Society for the Prevention of Tuberculosis. The incorporators of the reorganized society are: Drs. Frank Warner, Columbus; John H. Lowman, Cleveland, and Robert H. Bishop, Jr., Cleveland; Mr. Charles L. La Monte, Columbus, and Prof. James E. Hagerty, Columbus.

Medical Department Changes.—The Medical Department of Western Reserve University, Cleveland, announces the following faculty changes: Dr. George Washington Crile, professor of clinical surgery, has been appointed professor of surgery; Dr. August Hamann, professor of anatomy, professor of applied anatomy and clinical surgery; Dr. Henry John Gerstenberger, assistant professor of pediatrics; Dr. Davidson Black, associate in histology and embryology; Dr. Frederick Cowles Herrick, associate in surgery; Dr. Walter Henry Merriam, associate in medicine; Dr. James Douglas Pilcher, associate in pharmacology and materia medica; Dr. John James Thomas, associate in obstetrics; Dr. William Hawksley Weir, associate in gynecology, and Dr. George Bourne Farnsworth, Cleveland, instructor in obstetrics.

PENNSYLVANIA

Personal.—Dr. S. Victor King, Pittsburg, is ill with septicemia in the Allegheny General Hospital, the result of an operation wound, a few days ago.——Dr. Edwin D. Schaeffer has been elected a member of the Reading School Board, and Dr. Frank J. Sable, alderman from the Fifth Ward.

Prevention of Social Disease.—At the annual meeting of the Williamsport Society for the Prevention of Social Disease, November 14, Prof. Charles E. Lose was elected president; Hon. John G. Reading, Rev. Robert F. Gibson and Mrs. W. D. Crocker, vice-presidents; Miss Clara Sebring, secretary; Dr. Ella N. Ritter, treasurer, and Rev. William Perry Eveland and Drs. Jean Saylor Brown and Wesley F. Kunkle, executive committee.

Philadelphia

Laboratory to Move.—Dr. Joseph S. Neff, director of health and charities, has made plans for the removal of the laboratory of hygiene, which is a part of the bureau of health, from the City Hall to the Philadelphia General Hospital.

Suspected Lepers.—Two women who are suspected of being lepers were removed to the municipal hospital, November 16. They have been placed in the isolation ward of the hospital while a strict investigation of their cases is being made.

Catholic Maternity Projected.—Last week, title was taken to 1229 Cherry Street and adjoining property. These lots were purchased for $26,000 and will eventually form the site of a maternity to be conducted under Roman Catholic auspices.

Charity Ball Beneficiaries.—Announcement has been made that the following charities will be beneficiaries of the thirty-second annual charity ball to be held at the Academy of Music on December 21: Maternity Ward of the Hospital of the University of Pennsylvania, women's medical ward of the Jefferson Medical College Hospital, Society for Organizing Charity, Visiting Nurses' Society of Philadelphia and the Epileptic Hospital and Colony Farm.

Sanatorium Pavilion Dedicated.—The children's pavilion of the Philadelphia Jewish Sanatorium, Eagleville, was dedicated with impressive ceremonies, November 5. About $3,000 was raised by auctioning of keys opening the various doors, and the announcement was made that two houses, completely furnished, had been donated to the sanatorium—one by Albert W. Fleisher, Philadelphia, in memory of his father, and the other by Louis Gerstley, president of the sanatorium.

TENNESSEE

Milk Commission Created.—The Memphis and Shelby County Medical Society has created a medical milk commission to work in conjunction with the city authorities to secure a purer milk supply for the city. The commission consists of Drs. J. H. Eugene Rosamond, Arthur G. Jacobs, Edward C. Mitchell, Alexander Erskine and Buford N. Dunavant.

East Tennessee Physicians Meet.—At the annual meeting of the East Tennessee Medical Society, October 12 and 13, held in Morristown, the following officers were elected: president, Dr. Gus S. Shipley, Athens; vice-presidents, Drs. Carl T. Speck, Cleveland, and William E. Howell, Morristown; and secretary-treasurer, Dr. Oliver W. Hill, Knoxville.

To Facilitate Reports.—In order to aid Memphis physicians and facilitate the reporting of contagious diseases and births, the city health department has prepared for distribution to all physicians of the city a cabinet containing a tablet of applications for reporting births, postal cards for reporting contagious diseases, vaccination blank books and copies of the state laws and city ordinances.

Antituberculosis Campaign.—An "All Tennessee" antituberculosis campaign was inaugurated October 11 in Nashville, with the following officers: chairman, Mr. F. E. Kuhn, Nashville; vice-chairman, Dr. Elizabeth C. Kane, Memphis; secretary, Dr. Henry P. Coile, Knoxville, and treasurer, Mr. C. A. Craig, Nashville. Nashville was chosen as headquarters and Mr. J. D. Strain was elected as campaign manager.——At a meeting of colored physicians of Nashville, called by Mr. J. D. Strain in the interest of a campaign against tuberculosis, a committee of five was appointed to carry on the work among the colored people of the city. Of this committee Dr. Albert S. J. Lester was elected chairman, Dr. John H. Holman, secretary, and Dr. J. H. Hale, Nashville, treasurer.

Personal.—Drs. Thomas A. Patrick and Archibald L. Yearwood, Fayetteville, were seriously injured in a runaway accident, November 7.——Dr. John R. Rathmell, Chattanooga, has been appointed a member of the State Board of Health, vice Dr. Thomas E. Abernathy, resigned.——Drs. Buchanan S. Wert and E. E. Reisman, Chattanooga, were painfully injured in an automobile accident in Chickamauga Park, November 1.——Dr. T. P. Holman, Fayetteville, is reported to be seriously ill.——Dr. W. E. Gallion, Oakdale, has been appointed local surgeon for the Cincinnati, New Orleans and Texas Pacific Railway.——Dr. David F. Banks, Nashville, was seriously injured in a collision between an automobile and his buggy recently.——Dr. Louis Leroy, Memphis, will act as president of the State Board of Health until January 1, when Dr. John R. Rathmell will assume charge of the office.——Dr. John B. Johnson, formerly superintendent of the Knoxville General Hospital, has located in Morristown.——Dr. George C. Keener, Kingsport, has been appointed chief physician at the branch state prison, Petros.

TEXAS

Quarantine Ship Bought.—Dr. Ralph Steiner, Austin, state health officer, has returned from the East, where he purchased for $13,000 a vessel for use at the Galveston quarantine station.

Ill and Injured.—Dr. David R. Fly, Amarillo, who has been critically ill at Marlin, is reported to be materially improved.——Dr. James J. Crume, Munday, was seriously injured in a runaway accident, November 6.——Dr. John D. Bedford, Amarillo, is reported to be critically ill at the Bedford Hospital.

Personal.—Drs. John O. McReynolds, Dallas; Ira C. Chase, Fort Worth; Dr. and Mrs. L. F. Bland, Port Arthur, and Dr. John R. Knight, San Angelo, have returned from Europe.——Dr. Stephen L. Mayo, Pendleton, has been elected medical director of the Temple Life Insurance Company, vice Dr. S. A. Watts, Moffat, resigned.——Dr. Arthur H. Butler has resigned as assistant health officer of El Paso.——Dr. Lyle J. Logue, Galveston, of the medical staff of the Austin State Hospital has resigned and will practice in Houston.

Church Sanatorium.—The Grace Evangelical Lutheran Church, San Antonio, has been donated a tract of land, valued at $15,000, on which to erect a hospital; and 8 acres in Bexar County, on which to establish a tuberculosis sanatorium. Dr. Frank E. Lindahl, San Antonio, has given up his practice for the time being in order to organize the work and solicit funds.

Tuberculosis Colony.—The Antituberculosis Commission of Texas, Austin, has issued a request for bids for the erection of the state sanatorium at Carlsbad, including administration, subsistence, power and equipment buildings, an infirmary, barns and lean-tos. The attorney-general has approved the abstract to the title to the 329 acres of land at Carlsbad. The institution will accommodate sixty patients.

District Society Meetings.—The San Angelo District Medical Association held its annual meeting in Coleman, October 26 and 27. Dr. Joseph B. McKnight, Brady, Brown County, was elected president, and Dr. J. Ernest Robinson, Brownwood, McCullough County, secretary. The next meeting will be held in Brownwood.——The Walker County Medical Association held its annual meeting in Huntsville, November 9, and the following officers were elected: president, Dr. Leonard H. Bush, Huntsville; vice-president, Dr. Eugene L. Angier, Huntsville; secretary, Dr. John W. Thomason, Huntsville; delegate to the State Medical Association, Dr. J. V. Wright, and censors, Drs. J. Porter Hendricks, Huntsville; Oscar M. Tinsley, New Waverly, and William E. Fowler, Huntsville.

Colored Professional Association.—The Lone Star State Medical, Dental and Pharmaceutical Association held its twenty-fifth annual session in Dallas, October 24-26. The organization is composed of colored men and women of Texas engaged in the professions of medicine, dentistry and pharmacy. The following officers were elected: president, Dr. Felix A. Bryan, Dallas; vice-presidents, Drs. Henry E. Lee, Houston; W. A. Willis, D.D.S., Galveston, and D. V. Hooper, Ph.G., Dallas; secretary, Dr. Ransom B. Barnes, Cleburne; treasurer, Miss A. E. Hughes, Ph.G., Clarkesville; state vice-president for the National Medical Association, N. T. Wallis, D.D.S., Fort Worth, and representatives to the National Medical Association, Dr. Napoleon J. Atkinson, Greenville, and J. L. Cockrell, D.D.S., Waco. Waco was selected as the next place of meeting.

Losses by Fire.—The office of Dr. Julius A. Smith, Greenville, was destroyed by fire, October 31, with a loss of $2,500, and the building owned by Dr. Charles T. Kennedy, Greenville, was badly damaged. The office of Dr. Thomas B. Spaulding, Greenville, was badly damaged by smoke and water.——Fire in the Flateau Building, Dallas, October 31, did damage to the office of Dr. William T. White, to the extent of $700, and caused slight damage by water and smoke in the offices of Drs. Marion P. Stone and Samuel M. Freedman.——Fire in the building belonging to the Lubbock Mercantile Company, Lubbock, October 28, damaged the office of Dr. Henry C. Lewis to the extent of $1,000, and that of Dr. Marvin C. Overton, $3,500, and Dr. William L. Baugh, $1,500. No insurance was carried.——The office of Dr. D. R. Cobbe, Devine, was damaged to the extent of $500 by fire recently.

VIRGINIA

Inebriate Farm Needed.—Dr. Stephen Harnsberger, in a paper read before the Medical Society of Virginia, contended that the state should provide an asylum or other suitable retreat for habitual drunkards where they might receive scientific treatment and, possibly, be cured. As result of this paper, a resolution was introduced before the society, calling on the president to appoint a committee of seven to appear before the next legislature and urge the establishment by the state of a farm for inebriates.

GENERAL

Practice of Medicine in the Canal Zone.—By an order which takes effect December 14, the President has decreed that it shall be unlawful for any person to practice or attempt to practice medicine, surgery, dentistry, pharmacy or midwifery within the Canal Zone without first having obtained a license therefor from the Board of Health of the Canal Zone. Any person thus offending shall be punished by a fine not exceeding $25, or by imprisonment in jail not exceeding thirty days, or by both such fine and imprisonment, in the discretion of the court; provided that this order shall not apply to commissioned surgeons of the United States Army and Navy or Marine-Hospital Service, or to physicians, surgeons, dentists or pharmacists and their assistants and nurses employed by the Isthmian Canal Commission, or to nurses acting under the orders of a licensed physician; and that any person shall be regarded as practicing medicine within the meaning of this order who shall prescribe for, operate on, or in any wise attempt to heal, cure or alleviate, or who shall in any wise treat any disease or any physical or mental ailment of another; provided that nothing in this order shall be construed to prohibit gratuitous services in case of emergency, or to the administering of ordinary household remedies.

Tri-State Professional Association.—At the meeting of the State Medical Association of colored physicians, dentists and pharmacists of Georgia in Athens last summer, a Tri-State Medical Association of Florida, Georgia and Alabama was organized and the following officers were elected: president, Dr. J. Seth Hills, Jacksonville, Fla.; secretary, Dr. Loring B. Palmer, Atlanta, Ga., and treasurer, Dr. Arthur M. Brown, Birmingham, Ala. The next meeting of the association is to be held in Jacksonville, February 1-3.

Medical Library Association.—With the object of increasing the membership and enlarging its field of usefulness, the Medical Library Association has sent out a brief bulletin. The association was founded in May, 1898, with the object of fostering medical libraries and maintaining a system for the exchange of medical literature among them. Any medical society, association, university or college having a fixed home and a library of at least 500 volumes with a librarian or other attendant in charge may become a member. Individuals may likewise become members. The bulletin explains the advantages of the library association and the method of interchange of books to physicians, particularly those not having easy access to extensive libraries of medical books, and gives the method of obtaining books from the exchange. The secretary is Miss M. R. Charlton, McGill University, Montreal, Canada.

Bequests to Charities.—The following bequests to hospitals and other medical charities have recently been announced:

Mercy Hospital, Pittsfield, Mass., $10,000 by the will of Mrs. Mary L. Nickerson.

Boston Dispensary, $100,000 in trust after the death of a beneficiary.

Boston Lying-In Hospital, $125,000 in trust after the death of a beneficiary.

Anna Jacques Hospital, Newburyport, Mass., $10,000 after the death of a beneficiary, by the will of the late Paul A. Merrill, Newburyport.

Dickenson Hospital, Northampton, Mass., $30,000, by the will of the late Louise W. Lyon of Northampton.

Presbyterian Hospital, Philadelphia, $5,000 for the endowment of a free bed to be known as the "Albert H. Stillwell bed," by the will of the late Mrs. Helen M. Stillwell.

Presbyterian Hospital, Philadelphia, $10,000 for the endowment of two beds; Orthopedic Hospital, $1,000; St. Joseph's Hospital, $500, and Mt. Sinai Hospital, $500, by the will of the late Mrs. Elizabeth K. Steele.

New York Foundling Hospital, Skin and Cancer Hospital, and Home for Incurables, New York City, each about $15,000, by the will of the late James Rufus Smith.

St. Luke's Hospital, New York City, $30,000 for the endowment of four beds; for the General Endowment Fund, $10,000, and $1,000 for the endowment fund for books and periodicals.

Columbia University, $10,000 for the endowment of a scholarship in the College of Physicians and Surgeons, by the will of the late Miss Phoebe Caroline Sword.

FOREIGN

Nobel Prize in Medicine.—It is reported that the prize in medicine this year is to be awarded to Dr. Gullstrand, professor of ophthalmology at the university of Upsala, for his research on dioptrics, that part of optics which treats of refraction. Gullstrand's formulas have been applied in making glasses for patients after removal of the crystalline lens; with these anastigmatic lenses the eye can be turned from the central focus for some distance without blurring the image.——The Nobel prize for physics has been awarded to W. Wien, professor of physics at Würzburg.

Agitation to Have License to Practice in France Require Naturalization.—Consul Yost writes from Paris that a commission, consisting of French physicians, dentists, lawyers, university professors and legislators, has drawn up a bill providing that no persons shall be permitted to practice law, medicine, dentistry or the other professions without first abandoning their citizenship in their own country and becoming citizens of France. Should this bill be introduced into parliament and become a law, it will mean that an American professional man desiring to practice in France under his own name will be compelled to reside a number of years in France in order to acquire French citizenship. The law would not affect those already practicing in France as it is not intended to be retroactive.

Recent Deaths in the Profession Abroad.—Besides the deaths mentioned by our correspondents, the profession has lost recently Dr. A. Sitzenfrey, privat-docent of obstetrics and gynecology at the university of Giessen and author of thirty-

six important articles that have appeared in German periodical literature since 1905 on various questions of the day and the fray. He succumbed at 39 to nephritis of scarlatinal origin in youth.——Dr. J. J. Kiær of Copenhagen, chief of the public health service, aged 82.——E. Emmert, professor of ophthalmology at the University of Berne, aged 67. His contributions to literature have been mostly on his specialty and school hygiene.——Dr. Pedro Albarran of Havana, a specialist in disease of the urinary apparatus, like his brother Joaquin at Paris, member of the Cuban congress and leader in matters affecting the public health and progress of science, aged about 60.

French Codex Standard in Uruguay and Santo Domingo.—The *Siglo Medico* of Madrid states that the authorities have designated the latest edition of the French Codex Medicamentarius as the standard pharmacopeia for use in these countries. In Santo Domingo a fine of from 50 to 500 pesos may be imposed for non-conformity with the standard, and up to 1,000 pesos in case of repetition of the offense. The pharmacists are said to be protesting against the imposition of this codex and against the size of the proposed fine. Our Spanish exchange laments this discrimination against the Spanish codex, and urges those in charge of the revision of the pharmacopeia for the next edition to make every effort to have it comply with all requirements so that it will be accepted by the Spanish-speaking countries of America. In Cuba the Spanish translation of the Pharmacopeia of the United States has been recognized as the authority.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, Nov. 11, 1911.

The Investigation of Sprue

Dr. P. H. Bahr has been appointed by the London School of Tropical Medicine to go to Ceylon to study sprue, which is responsible for a great deal of illness in that country, as well as in other parts of the east. Dr. Bahr has only recently returned from an expedition to Fiji where he has studied dysentery and filariasis. It is expected that the present investigation will last two years. The Ceylon government has provided $3,750 for the costs of the expedition and it is expected that the Ceylon Tea Planter Association will subscribe $1,250.

A House-Surgeon's Claim for Damages for Injuries Due to Experimenting on Himself with the X-Rays

A curious case has come before the court of appeal. A house-surgeon was in the employ of the Kidderminster Infirmary at a time when it had no *x*-ray apparatus. One was presented to the infirmary and was put in charge of one of the honorary surgeons with the house-surgeon to assist him. As neither of them had any experience of *x*-ray work, it was decided to experiment with the apparatus on the house-surgeon's arm before using it on some cases of ringworm of the scalp. As the result of fifteen minutes' exposure, his arm was badly burned and a sore was produced. He claimed compensation from the infirmary under the employers' liability act. The judge dismissed the claim, holding that the injury did not arise "out of and in the course of his employment." Against this decision he appealed. Without calling on counsel for the infirmary, the Master of the Rolls (the presiding judge) confirmed the judgment of the lower court, holding that it was no part of the house-surgeon's duties for which he was engaged to perform experiments on himself.

The Health of School Children

The legislation of recent years for the medical inspection and treatment of school children has made possible an exhaustive report on the condition of the child population of this country. The annual report for 1910, by Sir George Newman, M.D., chief medical officer of the board of education, just issued, points out that the health and physical condition of the 6,000,000 children on the school registers is the foundation of the health of the adult population. The conditions of life, both in respect of personal hygiene and environment, which result in a high mortality among children under 1 year lead to a high degree of sickness and disablement among children of school age; and in the same way, but probably to a still greater degree, the sickness of children leads to disease and disablement among adolescents and adults. Every step, therefore, in promoting the health of children is a step toward diminishing disease in adults. Malnutrition, dental caries, adenoids and measles are the ancestors of tuberculosis in the adults. Measures have now been adopted for the assistance and coordination of the local education and health authorities in the discharge of their duties and to secure effective harmony between all concerned with health questions in each area—doctors, school medical officers, health visitors, school nurses, teachers and attendance officers. The different branches of school medical work are unified under the school medical officer. There are six such branches—medical inspection, medical treatment, school sanitation, provision and management of special schools for the defective, physical training and the feeding of school children.

The statistics of disease discovered among the 6,000,000 children show but small variation from the figures of 1909, for although certain conditions, such as uncleanliness, are less marked than formerly, and although the treatment of many thousand children, through the agency of the local authorities, must have produced a reduction in the number suffering from remediable ailments, the percentages for the whole country have not yet been materially affected. About 10 per cent. of the children suffer from defective vision, from 3 to 5 per cent. from defective hearing; 1 to 3 per cent. have suppurating ears; 6 to 8 per cent. have adenoids or enlarged tonsils sufficient to cause obstruction and require operation; about 40 per cent. suffer from extensive dental caries; about 30 to 40 per cent. have unclean heads or bodies; about 1 per cent. suffer from ringworm; 1 per cent. from tuberculosis in readily recognizable form; from 1 to 2 per cent. from heart disease, and a considerable percentage from malnutrition in greater or less degree. Sir George Newman concludes that this formidable total greatly limits the capacity of the child to receive the education provided by the state.

In regard to treatment, the board has urged local authorities to take a wide view. Treatment should be applied through the school and educational authorities, on the one hand, and through the home surroundings of the child, on the other. In the mind of the public, treatment is too much associated with operations and medication, which often play only a subsidiary part, as for example, in adenoids, enlarged tonsils, many minor skin diseases, rickets, anemia and tuberculosis. Moreover, when operations or other institutional treatment has been necessary, failure to obtain the best results has often arisen from the fact that the private doctor, the school medical officer and the hospital physician and surgeon have been acting as isolated factors. This will now be remedied, through the cooperation above referred to.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Nov. 3, 1911.

The Reform of Medical Studies

October 30, the Assemblée générale de l'Association des professeurs et agrégés des Facultés et Ecoles de médecine met under the presidency of Prof. Jules Courmont of Lyons, who in his opening address officially announced that the ministers of public instruction and finance had agreed as to the amount necessary for the execution of the decrees with regard to medical instruction. The budget commission was unanimous in declaring that this outlay was urgently demanded. It may therefore be hoped that reform in medical studies will be accomplished by November, 1912.

The Use of Unauthorized Therapeutic Serum

Dr. Régnier of Paris was recently prosecuted under the law of 1895 with regard to therapeutic serums. Dr. Régnier had furnished an antisyphilitic serum prepared from the blood of immunized monkeys. In his own defense he said that he had furnished it only to physicians who asked it of him. But the law of 1895 especially requires that any serum used or put on sale shall be authorized by the government after reports from the Académie de médecine and the Pasteur Institute. The court confirmed the decision of the Cour de cassation (THE JOURNAL, Oct. 14, 1911, p. 1298) and sentenced Dr. Régnier to pay a fine of $20 (100 francs).

An Establishment of Blind Masseurs

For some years the services of blind masseurs and masseuses have been much appreciated at our stations of mineral waters. Some blind masseurs have just opened an establishment of massotherapy in Paris.

Death of Dr. Auffret

The death is reported of Dr. Charles J. Auffret, former inspector general of the sanitary service of the navy and national correspondent of the Académie de médecine.

Suggested Improvement in the Form of Reports of Urinalysis

At one of the last sessions of the Société de thérapeutique, Dr. G. Leven drew attention to the disadvantages of the present form of the reports of the analysis of the patients' urine. This report consists of two columns of figures side by side; the one shows the constituents of the urine examined, the others those of normal urine. Patients are always alarmed at the sight of figures which are perceptibly different from the results given for their own urine and this alarm may not only react injuriously on the patients but also may lead the patient to attempt to treat himself for the lack of certain substances in his urine. He does not understand that this lack is often only relative, being perhaps the consequence of the diet followed. Dr. Leven therefore suggests that the column of figures for normal urine be not given in the report of urine given the patient.

A Quack's Analysis

Dr. Charles Levassort, secretary of the office for the repression of illegal practice of medicine, relates that a peasant whose wife was sick, on the advice of a neighbor resolved to consult a "water examiner," that is to say, a quack who undertakes to discover the disease and prescribe a remedy after examining the urine. In a long letter the peasant described his wife's disease and announced that he was sending by the same post a box containing a bottle of urine. The post-office, however, refused to accept the package when the sender declared the contents, because it was not properly put up. The man finally lost his temper and threw the package away. He was surprised to receive, two or three days afterward, a letter from the "examiner of water," in which the latter explained that he had performed an exhaustive analysis of the urine and gave a diagnosis and a treatment which should cure the patient in eight days. It goes without saying that the quack asked a good round sum for the remedy he sent and for the "conscientious analysis" of the urine.

Vaccination of Infants Soon After Birth is Inefficacious and Dangerous

Up to the beginning of this year young infants in the hospitals and clinics of Paris have been vaccinated at the moment when they left the hospital, that is, toward the tenth day. The course of the vaccination was run at the homes of the parents so that no information was kept at the hospitals of the results of the operation. Therefore, the administration of the public charities, in order to learn the results, ordered the heads of the maternity services from the beginning of this year to have the infants vaccinated within the first three days after birth. One death resulted from uncontrollable hemorrhage following one of these early vaccinations and a discussion was held on the question at the Société d'obstétrique de Paris. According to Drs. Bonnaire, Bar, Tissier, Cathala and Boissard, early vaccination is useless in about half the cases. As on the other hand it exposes the infant to danger, it appears more prudent to wait, as in the past, until the infant is about two weeks old before submitting it to vaccination.

New Measures to Protect Glass-Blowers Against Risks of Contagion

A decree has just been issued, according to which, in glass-works where glass-blowing is done by mouth, the workmen will not be permitted to do work requiring the use of mouthpieces in common, except on the written testimonial of the physician of the establishment that they are not affected with any contagious disease which may be transmitted by the mouthpiece. This certificate is to be renewed once every fifteen days in bottle factories; in other glass-works every time the workman has had to leave his work more than fifteen days on account of disease. In glass-works where the blowing is executed successively by several workmen using the same mouthpiece, disinfection of all the mouthpieces will be performed before the beginning of the work of each crew.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Nov. 2, 1911.

Personal

Professor Tobler of Heidelberg has accepted a call as regular professor of pediatrics in Breslau.

Professor Flexner of New York and Professor Podwissotzky of St. Petersburg have been elected honorary members of the institute of experimental therapy. This is a distinction granted to those who have been of service to the institution in an intellectual or in a material way.

The medical chief of staff in the Bavarian army, General-stabsarzt von Bestelmeyer, has retired. His successor is Professor Seydel of Munich, hitherto Obergeneralarzt.

Old Age and Disability Insurance of Midwives in Bremen

Compulsory insurance for midwives has been instituted in Bremen. A midwife who has pursued her calling for at least five successive years in the Bremen state district is entitled, on the completion of her sixty-fifth year or on the occurrence of disability, to an annual income ranging from $87.50 (350 marks) to a maximum of $150 (600 marks). Each midwife must contribute to the fund, during the continuance of her calling, 12 cents (50 pfennigs) for every delivery at which she attends.

Memorial for Robert Koch

A committee for the erection of a monument to Robert Koch was formed some time ago under the leadership of Kirschner, the *Ministerialdirektor*. The imperial chancellor is the honorary president of the committee, which numbers several high state officials and other distinguished members of various social circles.

Berlin Medical Orchestra Association

The Berlin medical orchestra, the foundation of which I reported to you at one time, has again sprung into life. As practicing members only physicians, even foreigners, are accepted. As honorary members, the association admits contributors and patrons. The rehearsals are held in the Kaiserin Friedrich-Haus. Each year a charity concert is to be given, the profits of which are for the benefit of the widows and orphans of deceased physicians. The association at present has about sixty members, among whom is Professor His, the director of the first medical clinic, who is a violin virtuoso. [Vienna and Paris both have similar medical orchestras, and Paris has also an art association of exclusively medical members, with an annual exhibition.]

Punishment of a Quack for Criminal Carelessness

In a city of Saxony a quack who undertook the treatment of a child ill with diphtheria, has been convicted, because the medical experts concluded that the child could have been saved in all probability, if it could have been treated at the proper time with antitoxin. Consequently the court held the quack responsible for criminal neglect and sentenced him to three months' imprisonment.

Roman and German Script in the Reichstag

As I wrote to you some time ago, a petition was presented to the Reichstag asking permission for the employment of the Roman script by officials and in the primary courses in reading and writing in the public schools, and the petition was reported on favorably by a great majority of the commission which had the matter in charge. A decision was not reached at that session, and on being called up again it was put to a vote and the proposition of the committee was rejected by a large majority.

The Public Health in Prussia During 1909

As in previous years I would like to give you some interesting data from the government report on the condition of health in Prussia for 1909, which has just appeared. The number of deaths of children was 1,287,030, of which 1,249,040 were born living, 37,900 still-born. In comparison to the previous year, an absolute reduction of 21,253 births appears. The proportion of those born living to 1,000 inhabitants was 32 in 1909, and indicates a further regression in the birth-rate; in 1901 this figure was 36.52. Of those born living, 641,072 were males, 607,968 females. Among all the births there were 16,449 multiple births, 16,283 being twins, 164 triplets and 2 quadruplets; 12 more children per 1,000 are born dead in plural than in single births. The number of marriages in 1909 was about 308,000. As in previous years, women married somewhat earlier than men, especially in the country. Of 10,000 marriages in the urban communities, 23.51 men were less than 21 years old, and 937.59 women; in the country 22.48 men and 1,043.61 women. Marriage between blood relations occurred in 1,329 cases, about as frequently as in previous years.

The deaths in 1909 included 348,141 males and 319,641 females in a total population of 37,293,324. The entire number of deaths compared with the previous year has been reduced by about 26,000. The natural increase, i. e., the excess

of births over deaths, was greater than in previous years with the exception of 1906; in 1909 it was 581,258. The entire mortality reckoned for 1,000 inhabitants was 17.11 and was more favorable than in any previous year in the last decade. Of all deaths, 204,314 or almost one-third were under 1 year of age. Of 1,000 children in the first year of life there died 191.10 as compared with 206.21 in 1908 and an average of about 245 in the decade from 1891 to 1900. Particularly with reference to diseases of the digestive organs the mortality has been reduced as compared with 1908. The absolute number of suicides was 8,422, a figure both actually and relatively higher than in previous years. Hanging was preferred as the method for suicide as in previous years (about 52 per cent.), but suicide by poison is increasing. About 15,000 persons perished by accident, a rate of 37.2 per 100,000 living. The number of fatal accidents has fallen to a marked extent, both absolutely and relatively, when compared with the last four years. The number of deaths from murder and manslaughter was 876.

Reorganization of the Berlin Municipal Public Health Department

The management of Berlin municipal medical affairs has hitherto always been in the hands of a medical member of the city government. He was assisted by the Deputation for Public Health and Municipal Hospitals, composed of members selected from the officials of the city administration, members of the council and directors of the municipal hospitals and other laymen. The lay element predominated in the deputation, and it is thus readily understood how the management of municipal medical affairs, especially as regards initiative and progress, left much to be wished for. This defect has grown more marked from year to year, and indeed so much the more, the greater the growth of the city and the increase in importance of medical affairs. For a long time, therefore, a change in the management has been demanded, especially by the medical profession and in the medical press. The fulfilment of this demand was once thwarted by the opposition of the mayor, the Oberbürgermeister, who did not see the necessity of any improvement in the conditions, and by the obstinacy of the medical member of the city administration, who regarded himself as capable of filling his post in spite of the harsh criticisms to which he was constantly being subjected.

The circumstance that the president of the deputation referred to, a former merchant, has recently resigned his office, has finally given occasion for a renewed powerful effort on the part of the city council, under the leadership of physicians who belong to it, to have the public health department reorganized on a new basis. The demand took the form of a resolution that a salaried municipal medical counselor should assume charge of medical affairs. The city administration (the *Magistrat*) has felt compelled under this new impulse of public opinion to appoint a commission for the consideration of this resolution of the council. This commission has devised a different plan which promises to be more successful. The opinion prevails in the commission that the desired improvement of municipal medical affairs would not be reached simply by the creation of the office of medical counselor. The problems which must be solved in a community of the extent of Berlin are so extensive that no one man is able to cope with them. For this reason there should be established at the same time with the new office of medical counselor, a body to be composed of a large number of experts; this should furnish a sufficient guarantee for effectual action. This medical body should treat directly with the city government and it should not only discuss the questions referred to it by the city government, but also should have the right on its own account to make proposals and to be represented in the city government by the medical counselor or some other representative. To this body there should belong as members, in addition to the medical counselor, two directors each for the departments of internal medicine and surgery in the municipal hospitals, a pediatrist, an alienist, a representative of the medical chamber (*Aerztekammer*), a hygienist, two medical members of the council, the director of the municipal hygienic laboratory, and the municipal architect. The presidency is to be entrusted to a lawyer.

The editor of the *Deutsche medizinische Wochenschrift*, who for many years has repeatedly protested against the existing defects, criticizes this plan favorably in the latest number of his journal. With other experts, he has already frequently demanded such an organization; a further point in its favor is the circumstance that it is modeled on a similar institution already existing for many years at Hamburg. But differing from the views of the subcommission, Professor Schwalbe, the editor of the *Wochenschrift*, demands that the presidency of the corporation be entrusted, not to a lawyer, but to the new municipal medical counselor (*Medizinalrat*). Since the Prussian government has just determined to entrust the management of the state medical department, the *Medizinalabteilung*, to a medical man, it would be regarded as a deplorable backward step if the municipal medical counselor should not be considered by the city government to have the necessary amount of intelligence to preside. Further it is directed that the medical counselor should not, as proposed, be essentially subordinate to the administration as director of medical affairs but that he himself should belong to the city government as an integral official. Many conflicts will still develop with reference to the entire matter, respecting the outcome of which one may for the present be doubtful.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, Nov. 3, 1911.

Vital Statistics for Vienna

The results of a comparison of the census reports of Vienna for 1890, 1900 and 1910 have just been been published. Vienna now has a population of more than 2,000,000, of which in 1909 there died 34,000, or seventeen per 1,000, while the births numbered 43,854, or twenty-two per thousand.

The birth-rate of Vienna is constantly falling. In 1895 it stood at thirty-eight per thousand, in 1900 it had sunk to thirty-one per thousand, in 1905 to twenty-seven, in 1910 it reached only twenty-two; for 1911 it will hardly be higher than twenty, as far as the figures for the first nine months show. The death-rate also has a constant downward tendency. In 1895 it was twenty-three per 1,000, in 1900 it stood at twenty, and last year (1910) it was 16.5. The actual decrease affects mostly the middle-aged, while the children up to 15 years have shown fairly constant figures. A large influx of persons in the prime of youth up to 30 is responsible for the increase of the population in first line, for the yearly increase of the population was about 30,000 while the surplus over deaths was only about 10,000. As regarding morbidity, tuberculosis is leading; it demanded last year 7,380 victims, or 21 per cent. of the entire number of deaths; next come diseases of the respiratory organs (bronchitis, pleuritis, pneumonia) with 4,360 cases, or 12.6 per cent., diseases of the nerves and brain, 3,024 cases, or 8.7 per cent., circulatory disorders with 2,880, or 8 per cent., and new growths with 2,469 cases, or 7 per cent., so that these five groups of diseases make up 58 per cent. of the total number of deaths, and together with the fatal diseases of infants, and marasmus senilis, they make up 80 per cent. of all deaths accounted for. The influence of climate is well illlustrated by the periodical variations in morbidity and mortality. The average for the decade 1900-1909 shows that out of every 100,000 persons, the deaths were distributed as follows: during winter, 524; during spring, 576; during summer, 467, and in autumn, 427. During spring, the much longed-for season, the churchyard claims the most, fully 3,000 more than in the autumn. It thus seems very likely that the high mortality during spring is due to the after-effects of winter, for is the latter bad, as was the case in 1904-05, the number of deaths increase rapidly. The ill effects of this bad winter with its rapid changes of temperature and wind were felt all the year round, that year showing an excessively high mortality rate, 19.8 per 1,000, while the mild winter of 1910 showed the lowest figure yet recorded in Vienna (16.5 per 1,000) in spite of the increase of the population by some 100,000 if 1905 is taken for comparison. It is therefore no truism that the most important subject of discussion in Vienna is the weather.

Increasing Social Difficulties among the Lower Classes

The poorer classes of the population in Austria in general, and especially in Vienna, are having bad times just now. In addition to the great increase in the prices of necessities, a sudden and progressive rise in rent has been the source of great anxiety and riots have occurred. In vain some members of the medical profession have pointed out that such conditions mean deterioration of racial fitness. In vain military circles, otherwise so influential with us, have argued that underfeeding lessens the resistance of the soldiers and the fitness of recruits. The government has failed to find adequate mesures to combat this most disagreeable condition. One of the remarkable features of the scarcity of dwellings is the fact that families with numerous children are refused lodgings by the houseowners. And there is no law to teach these a lesson in the duties of a citizen. The general dis-

satisfaction is so widespread that earnest fears are justified, nevertheless those whose duty it is to watch over the nation's welfare seem to be blind to all these conditions. Lacking proper food in sufficient amount, lacking proper housing and toiling hard to support a miserable life, a part of the population is swiftly being pressed down to proletarian conditions, and the detriment to public health and morals is deplorable. Therefore repeated appeals have been made to the government to improve such conditions.

A Verdict in Favor of Legitimate Medicine

In a libel suit in Vienna between two medical men, the plaintiff, styling himself "doctor of medicine treating after more natural methods," felt himself ill treated by the defendant, who stated in a medical paper that such a title was misleading and was a swindle. The defendant, Dr. Grün, vice-president of the Vienna Medical Council, proved that the prosecutor, Dr. Pannesch, was editor of a quack periodical, that he repudiated vaccination and the use of poisons on human beings, while in his private practice he did actually vaccinate, and did use alkaloids such as morphin, codein, opium, strychnin and atropin, and that his therapeutic armamentarium did not differ at all from that of any ordinary practitioner. A prolonged cross-examination showed that the pretensions of the plaintiff were absolutely false, and the judge dismissed the claim. He strongly reprimanded Dr. Pannesch for the attitude he had taken in the affair, which turned out such a defeat to him, Dr. Grün being justified in calling him a swindler. The chief interest of the case, however, lies in the fact that Dr. Pannesch was, or rather still is, the leader of a party which has always been highly inimical to progress and openmindedness in medicine, as well as in social political matters. The untruthfulness of this party has now been exposed in open court to the public, and therefore the honest elements of our profession hope that the public will have learned what to think of these quacks who are enemies of vaccination and modern medicine in general.

Warning Against the Study of Medicine

Political opinions of irresponsible persons have been the cause of a large influx of students into the medical schools of this country, especially in the German-speaking universities. The parents in German-speaking frontier districts have been asked by the "German National Council of Austria" to make their children study medicine in order to strengthen the influence of the German population of the country. This advice was promptly followed; and the Medical Council of Bohemia therefore issued this year a warning to parents and would-be students of medicine against such an imprudent step. In a memorandum circulating all over the German districts, the present unsatisfactory position of our profession was explained. It is shown that the income derived from the practice of medicine is far from being an adequate return for the investment, while the prospects of a doctor in the country are much worse than those of competent business men or even a clerk in a banking establishment. Some figures illustrating the rates and taxes paid by medical men show that the average income from the practice for the majority of doctors is less than $1,000 a year, while even this figure is very often not reached. On the other hand, the risks and responsibility involved by the practice of medicine are so high in this country that they should deter the intending student from taking up the profession. Needless to say, the views expressed in this circular were endorsed by all the other medical councils of Austria.

Deaths

Surgeon-General Walter Wyman, United States Public Health and Marine-Hospital Service, died in the Providence Hospital, Washington, November 21, aged 63.

He was born in St. Louis, Aug. 17, 1848, the son of Edward Wyman, LL.D., widely known as an educator, and Elizabeth Hadley Wyman. He graduated from the St. Louis University in 1866, then attended Amherst (Mass.) College, from which he received the degree of A.B. in 1870 and that of A.M. in 1889. His medical course was taken in St. Louis at the St. Louis Medical College, the Medical Department of Washington University, from which he was graduated in 1873. He also received the honorary degree of LL.D. from the Western University of Pennsylvania, Pittsburgh, in 1897, from the University of Maryland, Baltimore, in 1907, and from Amherst College in 1911.

He entered the Marine-Hospital Service as assistant surgeon Oct. 21, 1876; was promoted to surgeon Oct. 1, 1877, and was made supervising surgeon-general May 27, 1891. In 1902 this service was expanded into the United States Public Health and Marine-Hospital Service.

WALTER WYMAN, 1848-1911

During his administration as Surgeon-General many improvements and advances in the Service have occurred. Special attention was given to the physical conditions affecting sailors in the merchant marine, for whose benefit laws were enacted. Official notice was called to the cruelties practiced on deck hands on river steamers and on crews of oyster boats. Cholera was barred from the country and many epidemics of yellow fever were successfully handled. A sanatorium for consumptive sailors was established at Fort Stanton, N. M., and the routine management of the marine hospitals was improved. Laws regulating the manufacture and sale of vaccines and serums have been enacted, and a Hygienic Laboratory at Washington and a Leprosy Station at Hawaii have been established. For the many advances made during his service as Surgeon-General, Dr. Wyman is deserving of much credit.

General Wyman's society membership was extensive, and included the American Medical Association, of which he was Vice-President in 1905-06; the American Public Health Association, of which he was president in 1902-03; the Association of Military Surgeons of the United States, of which he was president in 1904-05; and the American National Red Cross, of which he was vice-president and acting president in 1904, and a member of the central committee and board of consultation in 1905.

He was also a member of the American Academy of Medicine, American Medical Editors' Association; American Association for the Advancement of Science; American Climatological Society and many others. He was an honorary member of the Imperial Society of Medicine of Constantinople, the president of the first and also of the second General International Sanitary Convention of American Republics and the chairman of the International Sanitary Bureau of American Republics.

He was also chairman of the Committee on International Quarantine of the Pan-American Medical Congress in 1896, and of the Section on Public Health of the International Congress of Arts and Sciences in 1904; president of the Section on State and Municipal Control of the International Congress of Tuberculosis in 1908, and was a director of the National Association for the Study and Prevention of Tuberculosis and the National Association of Mental Hygiene.

Richard Morris Wyckoff, M.D. Bellevue Hospital Medical College, 1864; prominent as a sanitarian; died at his home in Brooklyn, November 11, from angina pectoris, aged 73. After graduation he became an acting assistant surgeon U. S. Army in 1865; was secretary of the Medical Society of the County of Kings from 1871 to 1882; physician to St. Peter's Hospital, Brooklyn, since 1875; an official of the Brooklyn Board of Health from 1869 to 1886; and for the last four years of this time was secretary of the department of health and deputy health commissioner. In 1894 he again was made deputy commissioner of health and sanitary superintendent and served in these capacities for four years. He was one of the founders of the Medical Society of the State of New York and of the New York Medico-Historical Society, and was well known throughout the United States by reason of his activities in the direction of hygiene and sanitation, and his frequent contributions to the periodical medical literature.

Nathaniel Rannells Coleman, M.D. Bellevue Hospital Medical College, 1870; New York University, New York City, 1877; a member of the American Medical Association, formerly president of the Ohio State Pediatric Society; a member of the Ohio Society for the Prevention of Tuberculosis and National Association of U. S. Pension Examining Surgeons; first president of the pension examining board of Columbus, O.; professor of physical diagnosis in Columbus Medical College from 1878 to 1892, and thereafter professor of practice of medicine in Ohio Medical University; formerly president of the State Board of Medical Registration and Examination; a member of the staff of Mount Carmel Hospital from 1886 to 1892, and of the Protestant Hospital from 1892 to 1897; died at his home in Columbus, October 31, from cerebral hemorrhage, aged 67.

James Frederick William Ross, one of the most prominent surgeons of Canada; died November 17, from double pneumonia, two days after an automobile accident, aged 55. He was a son of the late Dr. James Ross, who was a leading practitioner and obstetrician of his day in Toronto. He took his medical course at and was graduated from Trinity Medical College, Toronto, in 1878. He was one of the founders and a past president of the Academy of Medicine, Toronto, and also a past president of the Ontario Medical Association. He was a well-known contributor to medical literature, was professor of gynecology in the University of Toronto, gynecologist to the Toronto General Hospital and a member of the medical staffs of other hospitals.

Surgeon Eugene Wasdin, U. S. P. H. and M.-H. Service; died in a sanatorium near Philadelphia, November 17, from nervous disease of long standing, aged 53. Dr. Wasdin was born in Georgetown, S. C.; graduated from the Medical College of the State of South Carolina, Charleston in 1881; and after an internship of a year in the City Hospital, Charleston, entered the Public Health and Marine-Hospital Service in 1883 as assistant surgeon. Three years later he was promoted to Passed Assistant Surgeon and in 1898 was made surgeon. He was widely known in the service, did notable work in yellow fever epidemics, and was on duty in Buffalo at the time of the assassination of President McKinley and was one of the attending surgeons in the case.

John Yeatman Taylor, Rear Admiral U. S. Navy (retired); died in his apartments in Washington, November 16, from the effects of a gunshot wound of the head, self-inflicted, it is believed, while despondent on account of ill health and bereavement, aged 81. Dr. Taylor was a graduate of Jefferson Medical College in 1852, entered the Navy a year later and after thirteen years and eleven months of sea service and twenty years of shore and other duty, was retired as medical director with the rank of rear admiral, Jan. 21, 1901, on attaining the age of 62 years.

John A. Hillsman, M.D. Jefferson Medical College, 1859; formerly a member of the American Medical Association and an honorary member of the Medical Society of Virginia and Richmond Academy of Medicine and Surgery; surgeon of the Forty-Fourth Virginia Infantry, C. S. A., during the Civil War; died at his home in Richmond, November 5, aged 77.

David Charles Coleman, M.D. University of Georgetown, Washington, D. C., 1904; a member of the Massachusetts Medical Society; for five years city physician of Beverly, Mass.; died at the Beverly Hospital, November 6, a week after an operation for appendicitis, aged 32.

Merlin Freelan Blodgett, M.D. Tufts College Medical School, Boston, Mass., 1907; of Penacook, N. H.; formerly clerk and treasurer of Corinth, Vt., while motoring through Bradford, Vt., accidentally shot himself in the throat, October 28, and died from the effects, aged 28.

Henry Clay Dalton, M.D. Missouri Medical College, St. Louis, 1870; a member of the American Medical Association; from 1886 to 1892 superintendent of the St. Louis City Hospital and later professor of abdominal surgery in the Marion-Sims College of Medicine; a Confederate veteran; died in the Deaconess Hospital, St. Louis, November 3, a few hours after an operation for appendicitis, aged 64. Former associates and assistants of Dr. Dalton acted as honorary pallbearers at his funeral.

John Manning Mills, M.D. College of Physicians and Surgeons, San Francisco, 1902; formerly a member of the American Medical Association; for two years surgeon of the Alaska Packers Association at Cordova, and for several years thereafter district surgeon of the Northwest Pacific Railroad, with headquarters at Larkspur, Cal.; secretary of the Humboldt County Medical Society; died in his apartments in Arcata, Cal., August 12, from hemorrhage of the stomach, aged 54.

Edward Payson Turner, M.D. Long Island College Hospital, Brooklyn, 1882; for about twenty years a practitioner of New York City and assistant surgeon to the New York Elevated Railroad; for the last eight years a resident of New Vineyard, Me., and a member of the last state legislature; died at his home, October 18, from pneumonia, aged 56.

Louis Giuseppe Contri, M.D. University of Pisa, Italy, 1861; captain in the Confederate service during the Civil War; a member of the Kentucky State Medical Association; for several years secretary and treasurer of the Trimble County Medical Society; died at his home in Milton, November 1, from carcinoma of the stomach, aged 71.

Everett M. Brockett, M.D. Kansas Medical College, Topeka, 1897; a member of the American Medical Association and once president of the Shawnee County (Kan.) Medical Society; instructor in chemistry in his alma mater; died suddenly at his home in Topeka, October 31, from heart disease, aged 60.

Thomas S. Fortson, M.D. Kentucky School of Louisville, 1885; of Berlin, Ga.; was shot at Moultrie, Ga., October 30, by the town marshal and died on the train near Manchester, Ga., early the following morning, aged 43. There is said to have been ill feeling between the deceased and the marshal for several years.

Cornelius Timothy Smith, Jr., M.D., George Washington University, Washington, D. C., 1900; a member of the American Medical Association, and a successful practitioner of Tunnelton, W. Va., for several years; died at the home of his father in Croxton, Va., November 4, from tuberculous laryngitis, aged 41.

Karl Zapp, M.D. University of Wooster, Cleveland, 1895; formerly physical director of the turnvereins of Cleveland, O., and largely instrumental in the introduction of calisthenics in the public schools of that city; died in the Cincinnati City Hospital, October 25, after a surgical operation, aged 60.

Oscar H. Mann, M.D. Hahnemann Medical College, Chicago, 1856; last president of the village board, first mayor, and for forty-five years a resident of Evanston, Ill.; died at his summer home in Gobleville, Mich., October 24, from injuries received in a fall a few hours before, aged 77.

Edward J. Miller, M.D. Medical College of the State of South Carolina, Charleston, 1858; a veteran of the Civil War during which he served in the Third U. S. Cavalry; died at his home in Everett, Pa., September 29, from heart disease, aged 74.

Marriages

CAMERON ARTHUR LEATHERMAN, M.D., Dayton, O., to Miss Phedora Timmons, Coshocton, O., at Cincinnati, September 27.

ALEXANDER S. WOLF, M.D., St. Louis, to Miss Grete Beran of Vienna, Austria, at Mount Vernon, N. Y., October 14.

VICTOR DARWIN THOMAS, M.D., Elliott, Ill., to Miss Edith Eunice Von Solen of St. Paul, Minn., recently.

HARRISON C. PUTMAN, M.D., Canton, Ill., to Miss Nelle A. Hanlon of San Antonio, Tex., October 18.

WILLIAM R. HOWARD, M.D., Fort Worth, Tex., to Mrs. Ella May Emery of Anna, Ill., recently.

EDGAR B. SMITH, M.D., to Miss Josephine Swickard, both of Detroit, Mich., November 6.

ELMER H. DWELLE, M.D., to Miss Lila Emery, both of Northwood, Ia., November 1.

The Propaganda for Reform

HESPERIAN TONIC

A Misbranded Nostrum Sold as a Cure for Diphtheria

Mystery is as essential to the "patent medicine" faker of the twentieth century as it was to the magicians of the second. Take away the element of secrecy and you puncture the bubble of quackery. Within the past few years, the public has shown a tendency to demand of the "patent medicine" manufacturer, to a small degree at least, that openness of dealing that it has long insisted on in more honorable lines of business. But as openness and frankness are inimical to the success of nostrum exploitation, it is evident that the public is asking for something that it will not get. Many of the "patent medicine" makers, it is true, have pretended to accede to this demand and, with a flourish of trumpets, have announced that there is no secrecy about the composition of their products. What they do, of course, is to take a page from the book of the exploiters of so-called ethical proprietaries and publish formulas that are either false or meaningless.

Photographic reproduction of a label from a bottle of Hesperian Tonic. Note the claim that it is "a positive cure" for various serious conditions; also note the absence of any statement regarding the presence of alcohol!

A concern with the somewhat imposing title Temple of Health Medicine Company of San Francisco, sells a nostrum for the alleged cure of diphtheria. It is called Hesperian Tonic and is claimed to have been originated by "the eminent Physician, Scientist and Chemist, J. W. Roberts, A.M., M.D., of the University of Michigan." Who "J. W. Roberts" is, we do not know. The medical directories give no information concerning such a man. According to the official records there is no such man licensed in either California or Michigan; neither is he licensed in Utah, where he claims to have "cured 414 cases of diphtheria in succession."

According to the label, each fluid ounce of Hesperian Tonic contains:

Flussiges Eisenchlorid	..... Gm.	7,500
Versusster Salpetergust	..... Gm.	15,000
Distillerte Wasser	..... Gm.	7,500

To the uninitiated, the apparent frankness of this formula may seem credible. Of course, not one layman in ten thousand will be any the wiser when he has read it than he was before. In plain English, the formula signifies that the preparation is a solution of ferric chlorid and spirits of nitrous ether in distilled water. The idea of publishing the composition in indifferent German is admittedly a master stroke of advertising trickery.

The claims made for Hesperian Tonic were as false as they were cruel:

"A Positive Cure for Diphtheria, Scarlet Fever, Measles, Pneumonia."

"A Sure, Safe, Speedy and Permanent Cure of That Most Dangerous Disease: Diphtheria."

"A great destroyer of all parasites, animalculæ and microbes of the blood."

"Hesperian Tonic, effectually, permanently and speedily cures the very worst forms of Diphtheria, Canker, Erysipelas, Scrofula, Salt Rheum, Ulcers and Old Sores of long standing."

"Is a powerful and proven Germicide."

This particular fake was brought to the attention of THE JOURNAL in a somewhat unusual way. During an epidemic of diphtheria in Chicago, some months ago, the city health department received a long rambling letter from the exploiters of Hesperian Tonic and a dozen bottles of the nostrum itself. It was evidently the desire of the concern to use the epidemic as an advertising asset for its preparation. The health department was urged to "put it to the most rigid test at once as a preventive and cure of diphtheria." The officials were also notified that should they wish to order any more of the preparation "the price of Hesperian Tonic laid down in Chicago is $96 per gross bottles."

Tests were made in the Chemical Laboratory of the American Medical Association to determine how nearly the composition that was claimed for the nostrum corresponded to its actual make-up. The chemists' report[1] follows:

LABORATORY REPORT

Hesperian Tonic is a brown liquid with an odor resembling spirits of nitrous ether. When slightly heated it easily ignites and continues to burn, indicating a relatively large percentage of alcohol. The liquid responded to tests which indicate the presence of alcohol, iron, chlorid, a trace of nitrite and some nitrate. The presence of arsenic, heavy metals and alkaloids could not be demonstrated. Quantitative analysis indicated the presence of alcohol equivalent to 33.72 per cent. U. S. P. alcohol by volume; and iron (Fe) 2.151 gm. per 100 c.c., equivalent to approximately 21.50 gm. liquor ferri chloridi, U. S. P. No nitrous ether (ethyl nitrite) was found although the odor of the preparation and the formula pointed to its presence. In view of the ease with which spirits of nitrous ether decomposes, this is not surprising. Experiments on mixtures of ferric chlorid solution and spirits of nitrous ether were made and showed that in such a mixture, the nitrous ether is decomposed quite rapidly with reduction of some of the iron to the ferrous state and the formation of some nitrate. From this it is concluded that Hesperian Tonic is a water-alcohol solution of ferric chlorid with decomposition products of the spirits of nitrous ether, probably present originally.

All of which shows that Hesperian Tonic is merely a simple mixture sold under a misleading formula. Incidentally it is misbranded both because the presence of alcohol is not declared and because the ethyl nitrite said to be present, is absent. Considering the educational caliber of the average nostrum-maker, it is not surprising that "J. W. Roberts, A.M., M.D., of the University of Michigan, and founder of Hesperian Tonic" should be unaware of the readiness with which ethyl nitrite (spirits of nitrous ether) decompose or he might have saved himself the expense and trouble of adding this ingredient to his worthless and wickedly expolited "patent medicine."

The viciousness of selling a worthless nostrum for the cure of so deadly a disease as diphtheria will be perfectly patent to every physician. The public, however, has not yet reached the place where it realizes that the modern medical treatment of this one-time scourge by antitoxin is so sure and so free from danger as to make dallying with this dangerous disease little less than criminal. But what cares the exploiter of "patent medicines" for the danger or death of the many so long as the sacrifice results in disbursements of dividends to the few!

REPORT OF THE COMMITTEE ON PATENTS AND TRADE-MARKS

The Council appointed a committee to discuss the abuses connected with the patenting and trade-marking of medicines. This committee submitted its report, which was adopted by the Council. In order that physicians may become familiar with these matters, the Council authorized its publication.

W. A. PUCKNER, Secretary.

To the Council on Pharmacy and Chemistry: Your committee, after reviewing the existing abuses in connection with patents on medicinal substances, recommends that the Council on Pharmacy and Chemistry request the cooperation of the Council on Health and Public Instruction in a thorough study of the various questions that are involved, with the view of endeavoring to inaugurate a more wide-spread interest in the possible injury to the public from a misapplication of the laws relating to patents on medicinal preparations.

1. The details of analysis will appear in the Annual Report of the Chemical Laboratory.

As an illustration of the abuses that may arise and the injustice that can be done at the present time, it may be well to call attention to some of the variations in the laws relating to patents in different countries.

The duration or life of a patent varies from a minimum of three years in some of the South American republics to twenty years in Mexico, Belgium and Spain; our own country limits the life of a patent to seventeen years.

In Germany, Austria and Hungary food products and chemical products as such cannot be patented, although the processes by which such products are produced may be patented. In France no patents are granted for medicines and pharmaceutical compositions, and added precautions are taken to prevent the creation of a monopoly in the manufacture and sale of medicinal products. In Denmark medicines and food products are not patentable, and in Switzerland neither the product nor the process for making a chemical substance can be patented.

In our own country both product and process patents are granted for useful inventions quite irrespective of the uses for which the product is intended.

The rights and privileges conferred on individuals under our American laws relating to patents and trade-marks have been repeatedly discussed in so far as these laws are thought to interfere with or to hamper rational progress in sciences relating to materia medica, and attention has been called to many of the more or less apparent abuses.

At the Chicago (1908) meeting of the American Medical Association a special committee of five was appointed by the House of Delegates to study the questions involved, and to cooperate with the committee on medical legislation in preparing and securing the enactment of a bill which would correct the abuses thought to be connected with the enforcement of our patent laws. (THE JOURNAL A. M. A., June 13, 1908 p. 2003).

This committee presented a comprehensive report at the Atlantic City (1909) meeting of the American Medical Association (THE JOURNAL A. M. A., June 19, 1909, p. 2063). The committee, recognizing the fact that questions relating to patents and trade-marks are in a state of great confusion, suggested that redress from existing abuses be sought in court rather than by a change in the existing patent laws.

At the St. Louis (1910) meeting of the American Medical Association (THE JOURNAL A. M. A., June 18, 1910, p. 2079) the committee presented a report in which it was suggested that the subject be left to the Committee on Legislation and that the special Committee on Patents and Trade-Marks be discharged.

Other organizations have discussed the abuses arising from our present system of patent laws and their enforcement, and it is generally agreed that both for the public as well as for the inventor our laws and our system of patent law jurisprudence could be improved on. One well-known attorney in discussing this question from the point of view of the patentee (Louis C. Raegener, *Jour. Ind. and Eng. Chem.*, 1909, i, 203) asserts that this country gives the worst protection possible to the patentee seeking to enforce the rights plainly given him by the statutory law; on the other hand, by trick and device not found in the statutory law or in the patent laws of any other country, it enables him to hamper trade in the most effective manner possible.

The relation of our patent laws to our trade-mark laws and to corresponding laws in other countries is not generally appreciated and much educational work is needed. For instance it should be pointed out that names that are free in one country may be protected in another so that the publicity given to scientific investigations made in one country may be used for advertising purposes in connection with a proprietary article in another country.

In this connection it might be well to state that in France the word "adrenalin" has been denied registration for fear that a monopoly in the manufacture and sale of a pharmaceutical product might be created if an exclusive right were given to the name by which such product is generally known, while in our own country the same name is applicable only to the product of one firm. On the other hand, the word "antipyrin" which is now included in the Pharmacopeia of the United States and generally accepted as a generic name for a well-known chemical, appears to be protected in some of the countries of Europe and applicable only to the product put out by the original manufacturers.

The abuses arising from this variation in the trade-mark laws of different countries should be studied with a view of suggesting means for overcoming the troublesome questions arising in connection with the nomenclature of synthetics and other new remedies for which arbitrarily coined words are being used.

One other point that is worthy of serious consideration is the fact that practically all of the abuses that are evidenced in connection with patents or trade-marks and new remedies are due to the *abuse* rather than the rational use of the remedies under consideration. For a patent establishes a monopoly; a monopoly permits of excessive profits; excessive profits lead to extensive advertising; extensive advertising leads to misuse of the patented article.

To recapitulate briefly the observations and suggestions herein offered your committee would recommend:

1. That for the present at least no effort be made to test the validity of a product patent which has been declared valid in one or more courts.
2. That the inadequacy of our present patent laws in so far as they pertain to drugs and medicines, and particularly their enforcement, be brought to the attention of the medical profession with the view of securing the interest and cooperation of physicians in an improvement of present conditions.
3. That the Council on Pharmacy and Chemistry request the cooperation of the Council on Health and Public Instruction in a comprehensive and comparative study of the patent laws of the leading countries of the world and subsequently to aid in bringing to the attention of the profession and of the public the abuses arising from proprietary rights in names or in products used in connection with the healing art.

Correspondence

Artificial Respiration in Asphyxia Neonatorum

To the Editor:—My attention was attracted to an interesting article on asphyxia in the Therapeutics Department of THE JOURNAL (Sept. 23, 1911, p. 1056). After the author has discussed asphyxia livida and asphyxia pallida with appropriate methods for their treatment, he proceeds by saying that "next, the 'Byrd Dewey' method of artificial respiration should be tried," and then he gives the method of operation, not in accordance with the "Dew method." This leads to a desire on my part to make some important incidental statements.

In March, 1893, I read a paper before the New York Academy of Medicine in which I established a new method of artificial respiration in asphyxia neonatorum, which I regarded as absolutely original with myself, having practiced it for a great many years. In calling Dr. Clifford Edgar's attention to my paper and asking him to participate in its discussion at the academy, he told me of a method proposed by Dr. Byrd of Baltimore, which was very similar and which he had published in his book. I had never before seen or heard of Dr. Byrd's method and cannot now describe his procedure.

The directions for my method are to grasp the infant with the left hand, allowing the neck to rest between the thumb and forefinger, the head falling far over backward, straightening the mouth with the larynx and trachea, at the same time serving to raise and hold open the epiglottis. The upper portion of the back and scapula resting in the palm of the hand, the other three fingers should be inserted in the axilla of the baby's left arm, raising it upward and outward. Then, with the right hand, if the baby is large and heavy, grasp the knees in such a way as to hold them with the right knee resting between the thumb and forefinger, the left between the forefinger and middle finger. This position will allow the back of the thighs to rest in the palm of the oper-

ator's hand. If the infant is small and light it will be found easier and more convenient to hold it in the same way by the ankles instead of by the knees, allowing the calves instead of the thighs to rest in the palm of the hand. The next step is to depress the pelvis and lower extremities so as to allow the abdominal organs to drag the diaphragm downward, and with the left to bend the dorsal region of the spine gently backward. This causes the ribs to move upward and outward, opening up like the segments of a fan, thus enlarging the cavity of the thorax both laterally and vertically, exciting inspiration. Then, to excite expiration, reverse the movements, bring the head, shoulders and chest forward, closing the ribs on each other and at the same moment bring forward the thighs, resting them on the abdomen. This movement arches the lumbar region backward, and so bends the infant on itself as to crowd together the contents of the thoracic and abdominal cavities, resulting in a most complete and forcible expiration. While this movement is a powerful one, the operator can, by his manipulations, accomplish it without shock and render it as gentle as he pleases. These movements should be repeated from ten to fourteen times a minute. In some instances it will be found desirable by mouth-to-mouth inflation to fill the lungs. This will often aid the introduction and expulsion of air. This method is prompt, reliable, easy to perform and perfectly safe; it possesses all the advantages of the Schultze method and none of the disadvantages.

ADVANTAGES OF METHOD

1. It is most efficient in all cases in which artificial respiration in asphyxia neonatorum is indicated.

2. Years of experience have proved its unquestioned value.

3. It can be practiced with ease and readiness to the operator.

4. Its movements are easy and can be resorted to at any moment and anywhere.

5. While its inspiratory movement will be found, by experience, to be even more efficient than in most other methods, the expiratory movement is far more complete and satisfactory than in any other method.

6. Nearly or about all of the air drawn in can be exhaled. This is a great advantage.

7. Owing to the force and at the same time to the absolute control which the operator has over the expiratory movements, he is able to compress the contents of the thoracic cavity to just exactly that degree deemed by him wisest and best, thereby favoring and hastening the general circulation, since by every act of compression the blood is forced from the heart and large blood-vessels, the valve opening for the forward flow and closing on any recoil or backward movements.

8. This method can be employed before cord is cut, where it seems important to save as much blood as possible to the infant.

9. The operator can sit or move from place to place about the room, greatly to his relief from fatigue, still continuing the respiratory movements.

10. If thought best, the movements can be kept up while the infant is immersed up to its chin in hot water.

11. By elevating the buttocks and depressing the head and shoulders, the expulsion of mucus can be effected as in the Schultze method.

12. This method can be readily alternated with other methods when thought best.

J. HARVIE DEW, New York.

Transmission of Disease by Books

To the Editor:—I am preparing a paper on "Books As a Source of Disease," to be read before the International Congress of Hygiene and Demography, and in order to obtain data I respectfully request the readers of THE JOURNAL to send me an account of any cases the source of which has been traced to books or papers, or in which the evidence seemed to make books the offender. Furthermore, I would be interested in information about cases in which illness or even death has been caused by the poisons used in book-making. All the information possible is wanted to present as complete a paper as possible. As in the case of insects which we now know to be "carriers of disease," it is first necessary to collect the scattered evidence in order to show that there is real danger in books; this evidence will lead to better care being taken of libraries, and thus be a factor in preventive medicine.

W. R. REINICK.

1709 Wallace Street, Philadelphia.

Data on Uterine Cancer Patients Wanted

To the Editor:—With the approval of a number of prominent gynecologists of this city, I am gathering statistics on uterine cancer from a new aspect; with the hope that some deductions of value may be made from a long series of cases. I am not a physician myself, but I have printed blanks which I will be glad to send to any physician who will have his patients fill them out. They are printed in the simplest form possible, so that they may be filled out by the patients themselves, thus relieving the physician of that labor, except that he is requested to supply the diagnosis of the case on the last page after the blanks have been otherwise fully filled by the patient. All suggestions of cancer have been studiously avoided, and the blank contains a statement to the patient that a study is being made of nervous disorders.

I will be glad to send as many blanks as are desired, to any physician who will have them filled out for me.

E. ATLEE, West Spruce Street, Philadelphia.

A National Department of Health

To the Editor:—However we may view osteopathy, we must congratulate osteopaths, as was done in the editorial in THE JOURNAL (Nov. 11, 1911, p. 1620), on their change of front regarding the national department of health movement. Their anxiety lest a physician be appointed to the cabinet discloses only a small remainder of those fears which impelled them to oppose the Owen bill *in toto*. I think that were there appointed as secretary of health a recognized master of sanitary organization, all these sectarian differences would coalesce in one voice of satisfied approval.

Whether it be premature to suggest and urge a fit man for secretary of health is a matter of forecast. I will risk being called out of order, however, and say that were Colonel Gorgas asked to try to do for the United States what he has done for the Isthmus of Panama, no one cognizant of his record could oppose the choice.

JOSEPH S. LEWIS, Buffalo, N. Y.

Philanthropic Cancer Work

To the Editor:—The remarkably good work, from the standpoint of science as well as philanthropy, which is being conducted by the St. Louis Barnard Free Skin and Cancer Hospitals, should be called to the attention of the medical profession through the columns of THE JOURNAL. It will not be devoid of interest to the readers to learn that in the Middle West opportunities are presented to physicians for the observation and study, at the bedside and in the laboratory, of cancerous disease to an extent not equaled anywhere in this country. The large wards and well-attended outdoor services are supplemented by laboratories equipped for every phase of cancer work which might suggest itself. The pathologic and research work is in charge of a full-time director, aided by competent assistants.

From the standpoint of philanthropy the hospital is unique. Sufferers from cancerous disease unable to purchase elsewhere accommodations and services are admitted free; but no patient has access to the hospital who is able to seek elsewhere the necessary relief and treatment. Everything is free both to the patients and to those physicians who wish to avail themselves of the advantages of the hospital. Necessarily the number of patients who can be admitted is limited, and it is not a home for incurables; but the administration makes every effort to accommodate those seeking admission and extends the benefits of the institution to all who need them.

The St. Louis Cancer Society has also started a movement for the diffusing of knowledge concerning cancer and its ravages. During the coming winter members of the medical staff will deliver lectures, scientific as well as popular, before the medical societies of the state and before popular audiences.

The awakened concern of the medical profession in the cancer question is best illustrated by the fact that the Cancer Society was induced to undertake this work partly on the initiative of the medical societies which have requested lecturers for their meetings. This new government gives promise of doing work in a field hitherto much neglected.

E. J. GOODWIN, St. Louis.
Secretary, Missouri State Medical Society.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

DISAPPEARING INKS

To the Editor:—Some time ago I read a formula for an ink which would fade in a few days after being put on paper, but I am unable to find the reference at present. For obvious reasons such an ink would be of great value in prescription-writing. Can you give a formula for such an ink? J. L. WICKS, Evanston, Wyo.

ANSWER.—Starch iodid is the substance which has been most frequently recommended as the basic constituent of "disappearing inks." A recent article in the *Practical Druggist*, October, 1911, contains the following:

"There is a well-known proprietary article sold in Paris under the name of 'Encre pour les Dames' (ink for the ladies). Hager, in a recent scientific journal, states that this consists of iodid of starch, and is especially intended for love letters. In four weeks characters written with it disappear, preventing all abuse of letters, and doing away with all documentary evidence of any kind in the hands of the recipient."

While inks of this sort have often been mentioned, none of the formulas proposed, we believe, would yield such an ink. Either the marks produced by the various preparations which have been proposed do not vanish with time or else these marks appear capable of being restored. If an ink of starch iodid does disappear, the blue color of the starch iodid could no doubt be restored with a suitable treatment of a dilute iodin solution. While such disappearing inks might possibly be valuable to the prescribing physician, it is a blessing that they have not been available. If such an ink were discovered, it could and would be used for criminal purposes, for it would enable one to write checks, notes, and promises which, in the course of time, would leave behind but a blank slip of paper.

A CRITICISM OF CERTAIN PRESCRIPTION-WRITING

To the Editor:—In THE JOURNAL, November 4, several errors in Latin occur in the fifth prescription (p. 1523), which reads as follows:

℞	Gm. or c.c.	
Tincturæ belladonnæ	5	gr. lxxv
Olei amygdalæ dulcis (olei amygdalæ expressi)	30	ʒi
Vitellum ovi unius		
Aquam destillatam ad	200	ʒvi ʒv
Fiat emulsum		

Misce S. Two teaspoonfuls three times a day.

It is ungrammatical to write "aquam destillatam"; it should be "aquæ destillatæ." "Emulsum" is barbarous Latin; it should be "emulsio." It is wrong to write "vitellum ovi"; it should be "vitelli ovi." I enjoy reading THE JOURNAL, but such mistakes are provoking. Why not write the prescriptions in English? In the preceding (fourth) prescription (given below) there is also a mistake.

℞	Gm. or c.c.	
Extracti belladonnæ	3	
Foliorum belladonnæ ää	0.33	gr. v
Extracti gentianæ q. s.		
Fiant pilulæ, No. XXX.		

Misce S. One pill before breakfast. Increase slowly to five pills.

Without mentioning the error of prescribing "extracti belladonnæ 3 gm.," which is plainly a *lapsus calami*, I would call your attention to the fact that the prescription says "fiant pilulæ, No. XXX" and then comes "Misce S." After having made thirty pills, what shall the druggist mix? Perhaps the box and the pills? The correct way to write it would be "Misce. f. pil. No. XXX, S."

ALEX LOEW, Chicago.

ANSWER.—While we admit that Latin is sometimes a snare to the writer of prescriptions and that there would often be an advantage in writing in English, we believe that our correspondent's criticisms with regard to the Latin in the first prescription mentioned are made without due consideration.

"Vitellus" cannot be put in the genitive case, for there is nothing for it to depend on; it is the direct object of "recipe" and must therefore be in the accusative case. When the genitive of the name of the ingredient is used in a prescription, as it ordinarily is, it is a partitive genitive depending on a noun of quantity expressed by signs. This noun of quantity is grammatically in the accusative as the direct object of "recipe;" thus: "Recipe olei amygdalæ dulcis unciam unam." The prescription directs the druggist to take the yolk of one egg. If he were directed to take a given quantity *of* egg yolk, it would be correct to write "vitelli," the genitive then depending on the noun of quantity; as it is, "vitellum" is correct. "Aquam destillatam" is likewise the direct object of "recipe" and therefore is correctly written in the accusative case also. The druggist is directed to take, not a given quantity *of* water but water *up to* (ad) a certain quantity. In other words, the construction of "vitellum" and "aquam" is parallel to that of "unciam unam" (abbreviated to "ʒi") in the preceding line, and not to that of "olei."

We do not know on what grounds our correspondent declares "emulsum" to be a barbarism. We believe that the use of "emulsum," the neuter perfect participle of *emulgeo*, to signify a substance resulting from emulsification, is more in accordance with classical usage than the use of "emulsio," which would, in classical usage, mean the process. At any rate, while "emulsio" is used in some other countries, "emulsum" is the form adopted by the United States Pharmacopeia and in general use in this country.

As for the other prescription mentioned, our correspondent is clearly right. The manuscript was correct, both errors having crept in during the process of type-setting. As our correspondent says, the figure 3 opposite "extracti belladonnæ" is easily seen to be a mistake because of the "ää" following "foliorum belladonnæ" in the next line. "Misce," of course, should precede "fiant pilulæ." We owe thanks to our correspondent for the trouble he has taken to point out errors.

MEYER'S REAGENT

To the Editor:—Kindly inform me of the correct proportions that compose Meyer's reagent used in testing for blood.

J. P., St. Louis.

ANSWER.—Meyer's reagent is a solution of phenolphthalin (the reader is cautioned that this is not phenolphthalein) in sodium hydroxid solution. It may be prepared by dissolving 0.032 gm. of phenolphthalin in 21 c.c. of decinormal sodium hydroxid and adding a sufficient amount of water to make up the volume of solution to 100 c.c. The reagent may also be prepared by bringing together 1 c.c. of decinormal sodium hydroxid with somewhat more phenolphthalin than will dissolve in this quantity of alkali, diluting with 10 to 20 c.c. of water, filtering and adding to the filtrate 20 c.c. of decinormal sodium hydroxid and sufficient water to make up to 100 c.c. To this solution a minute amount of a solution of hydrogen peroxid is added. J. H. Kassel states that in most blood work it is sufficiently accurate to add 0.1 c.c. of the 3 per cent. commercial hydrogen peroxid solution. He has found that the distilled water used in making these solutions must have been distilled from glass, as minute traces of copper will act as an oxidase and give a pink color to the solution of alkalin phenolphthalin on the addition of hydrogen peroxid.

Phenolphthalin or dioxy-triphenyl methane carbonic acid is the leuko-compound of phenolphthalein and on oxidation it is converted into the latter compound. Pure phenolphthalin is colorless in alkaline solutions, but if it be oxidized in the presence of alkali, there results the deep purple-red coloration characteristic of phenolphthalein in alkali. It is on this change, brought about by the presence of minute amounts of blood, that the use of phenolphthalin as a test of the presence of blood depends.

Phenolphthalin may be prepared from phenolphthalein by dissolving the latter in a considerable excess of 30 per cent. sodium hydroxid solution, boiling with an excess of zinc-dust until a few drops of the strongly alkaline liquid no longer gives the color of phenolphthalein, after neutralization with hydrochloric acid and the addition of sufficient alkali to give a slight alkaline reaction. The solution is then decanted from the excess of zinc-dust and the phenolphthalin precipitated by acidifying with hydrochloric acid. The substance is then collected on a filter, purified by several crystallizations from water and alcohol and dried in the air at the ordinary temperature or in the oven at temperatures ranging from 50 to 80 C. It must be carefully protected from air and light and from dust.

PERIODICALS ON EYE, EAR, NOSE AND THROAT

To the Editor:—1. Please advise the best medical publications in this country, devoted to ophthalmology, or ophthalmology and laryngology combined, and the subscription price per year.

2. Can you tell where I can get the little book "Glimpses of Medical Europe," by Thompson? J. B. MORTON, Ridgefarm, Ill.

ANSWER.—1. Your question was answered in THE JOURNAL, Jan. 28, 1911, p. 209.

2. Thompson's book entitled "Glimpses of Medical Europe" is published by the J. B. Lippincott Co., Washington Square, Philadelphia, and costs $2.

USE OF ETHER WHICH HAS BEEN EXPOSED

To the Editor:—Please reply to the following queries:

1. If the residue of ether in a can is securely corked can it be safely used in a subsequent anesthesia?

2. Is the safety of an anesthetic jeopardized by using ether which has been previously exposed? If so, why? X. Y. Z.

ANSWER.—1. Yes. 2. No. These answers presuppose that the ether in the can is pure and unmixed with other substances.

SNAKE VENOM IN TREATMENT OF EPILEPSY

To the Editor:—Where can I find an abstract which I saw in THE JOURNAL, dealing with the use of snake venom in epilepsy? H. F. CASSIDY, Baltimore.

ANSWER.—In THE JOURNAL, Sept. 23, 1911, p. 1085.

ABSENCE OF APPENDIX

To the Editor:—In a late issue of THE JOURNAL (Nov. 4, 1911, p. 1535) was reported a case with the absence of the appendix. I have notes of a post-mortem examination some years ago, in which was discovered a similar condition associated with others equally remarkable. The subject was the body of an aged man who had died, apparently, from infection following a prostatotomy. The search for the appendix was fruitless, though the peritoneum was stripped from the cecum and ascending colon and ileum for several inches, entirely exposing the muscular walls. There were no adhesions or other lesions which might have obscured conditions; the bowel could be delivered and inspected in detail. At the site of the appendix was a small pit in the cecal wall about half an inch in diameter, and projecting outward probably one-half that distance; more correctly, it could be made to project by the finger or instrument, as the condition was unnoticeable until the muscular wall was exposed. This rudimentary vestige of an appendix was the only evidence of an attempt to develop that organ.

Two other anomalies were discovered: The right testicle was represented by a small mass of apparent scar tissue; the right kidney was only a number of cysts or pouches arranged side by side vertically, opening into the ureter. They formed a body suggesting the shape of the kidney, but only about a fourth of its size. No renal tissue was discovered. The findings would seem to suggest an unexplained state of arrested or erratic development, limited to the right side of the body, but to no special tissue or organ. U. S. BIRD, Tampa, Fla.

A NEW TERM—ANESTHESIOLOGY

To the Editor:—In THE JOURNAL (November 4, p. 1538) you have an excellent article under the heading "Anesthesia and Anesthetics." I suggest the heading "Anesthesiology," a term adopted by the University of Illinois, which is defined as "the science that treats of the means and methods of producing in man or animal various degrees of insensibility with or without hypnosis." M. J. SEIFERT, Chicago.

SYMPTOM-COMPLEX OR SYNDROME?

To the Editor:—Why do writers on medical subjects persist in using such a clumsy, lumbering expression as "symptom-complex" when we have a good, English, euphonious word which means the same thing—"syndrome"? CURIOUS.

The Public Service

Medical Department, U. S. Army

Changes during the week ended Nov. 18, 1911.

Ingalls, R. E., dental surgeon, November 1, left Fort Douglas, Utah, en route to Fort Yellowstone, Wyo., for temporary duty.

Ebert, R. G., colonel, November 6, left San Francisco en route to Honolulu, T. H., on detached duty.

Allen, John H., major, November 9, ordered to proceed to Fort Ontario, N. Y., about November 26, to accompany 24th Inf. to San Francisco.

Stone, Frank P., dental surgeon, November 10, reported for temporary duty at Jackson Barracks, La.

Jones, Harold W., captain, November 10, granted fourteen days' leave of absence.

Whitcomb, C. C., major, November 10, on discontinuance of the medical supply depot, Maneuver Division, San Antonio, Tex., will return to station in New York City.

Ford, Clyde S., major, November 10, granted two months' leave of absence on surgeon's certificate of disability.

Yemans, Herbert W., M.R.C., November 11, relieved from duty at Fort Wayne, Mich., and ordered to Philippines division for duty on the transport sailing from San Francisco Jan. 5, 1912.

Henning, O. F., M.R.C., November 14, granted thirty days' leave of absence, to take effect on arrival in the United States.

Whaley, Arthur M., captain, November 14, granted three months' leave of absence, about Dec. 5, 1911.

Guittard, A. M., M.R.C., November 14, orders relieving him from duty in the Philippines division revoked.

Heterick, Robert H., M.R.C., November 15, the resignation of his commission accepted by the President on Nov. 16, 1911.

Millikin, John D., dental surgeon, November 15, leave of absence extended two months.

Ashford, Mahlon, captain, Nov. 13, 1911, ordered to proceed to Fort D. A. Russell, on expiration of leave of absence, for duty with Field Hospital and Ambulance Company No. 1.

Leary, Thomas J., lieut., Nov. 13, 1911, ordered to proceed to Fort Slocum, N. Y., on expiration of leave of obsence, for duty.

Shields, William S., lieut., Nov. 13, 1911, ordered to Columbus Barracks, Ohio, for duty, relieving Lieut. E. F. Slater, M.R.C.

Slater, Ernest F., M.R.C., November 13, ordered to Fort St. Philip, La., for duty, on being relieved from duty at Columbus Barracks, Ohio.

Bayly, Rozier C., lieut., November 13, ordered to Presidio of Monterey, Cal., for duty.

Foley, Thomas M., M.R.C., November 13, on arrival at New York City ordered to Fort McIntosh, Tex., for duty.

Hopwood, Lucius L., captain, November 13, relieved from duty at Fort Monroe, Va., to take effect on arrival of Lieut. Jay D. Whitham, and will proceed to general hospital, Presidio of San Francisco, for duty with Field Hospital and Ambulance Company No. 2.

Medical Corps, U. S. Navy

Changes during the week ended Nov. 11, 1911.

Edgar, J. M., medical director, commissioned medical director from Sept. 17, 1911.

Wilson, G. B., medical inspector, commissioned medical inspector from Feb. 27, 1911.

Stitt, E. R., medical inspector, commissioned medical inspector from June 11, 1911.

Carpenter, D. N., surgeon, detached from the naval academy, November 14, and ordered to the *Delaware*.

Holcomb, R. C., surgeon, detached from the *Delaware* and ordered to duty at the naval hospital, Las Animas, Colo., December 1.

Chambers, W., P. A. surgeon, detached from the *Maryland* and ordered to the *Glacier*.

Donelson, M., P. A. surgeon, detached from the *Glacier* and ordered to the *Cincinnati*.

Lawrence, H. F., P. A. surgeon, detached from the naval hospital, Las Animas, Colo., and ordered to the *Nebraska*.

Eytinge, E. O. J., P. A. surgeon, detached from the *Cincinnati* and will continue treatment at the naval hospital, Mare Island, Cal.

Crow, G. B., P. A. surgeon, commissioned passed assistant surgeon from July 15, 1911.

Johnson, L. W., P. A. surgeon, commissioned passed assistant surgeon from Sept. 17, 1911.

Mann, W. Ir., Jr., P. A. surgeon, commissioned passed assistant surgeon from Oct. 3, 1911.

Taylor, J. S., surgeon, detached from the *Mississippi* and ordered to the naval training station, North Chicago, Ill.

Plummer, R. W., surgeon, detached from the naval training station, North Chicago, Ill., and ordered to the navy recruiting station, Detroit.

Iden, J. H., surgeon, detached from the *Washington* and ordered to the *Kansas*.

Smith, C. G., surgeon, detached from the *Montana* and ordered to the *Mississippi*.

Brooks, F. H., P. A. surgeon, detached from the *Marietta* and ordered to the *Birmingham*.

Reed, T. W., P. A. surgeon, detached from the *Maine* and ordered to the *Marietta*.

McDonnell, W. N., P. A. surgeon, detached from the *Kansas* and ordered to the *Washington*.

Shaw, H., P. A. surgeon, detached from the navy-yard, Washington, D. C., and ordered to the *Montana*.

Koltes, F. X., P. A. surgeon, detached from the navy recruiting station, Detroit, and ordered to the naval training station, North Chicago, Ill.

Farwell, W. G., P. A. surgeon, detached from the *Nebraska* and ordered to the navy-yard, Washington, D. C.

Changes during the week ended Nov. 18, 1911.

Haynes, J. P., asst.-surgeon, detached from the naval station, Olongapo, P. I., and ordered to the *Saratoga*.

Stone, E. P., medical inspector, when discharged from treatment at the naval hospital, Mare Island, Cal., ordered to treatment at the naval hospital, New York.

Lane, H. H., P. A. surgeon, commissioned passed assistant surgeon from May 5, 1911.

U. S. Public Health and Marine-Hospital Service

Changes for the seven days ended Nov. 15, 1911.

Schereschewsky, J. W., P. A. surgeon, detailed to represent the Service at the second annual meeting of the American Association for the Study and Prevention of Infant Mortality to be held in Chicago, Nov. 16-18, 1911.

Warren, B. S., P. A. surgeon, directed to proceed to Washington, D. C., and report to the director of the hygienic laboratory for special instructions.

Creel, R. H., P. A. surgeon, relieved from duty in the hygienic laboratory, Washington, D. C., and from special temporary duty at the New York quarantine station, and directed to proceed to Ellis Island, N. Y., and report to the chief medical officer for duty.

Grimm, R. M., asst.-surgeon, granted thirty days' leave of absence from Nov. 15, 1911.

Bailey, C. A., A. A. surgeon, directed to accompany immigration service from Quebec to St. John, Canada, about Nov. 31, 1911.

Board of medical officers convened to meet at Norfolk, Va., Nov. 10, 1911, for the reexamination of an alien. Detail for the board: Surgeon C. P. Wertenbaker, chairman; Surgeon H. S. Cumming, recorder.

Society Proceedings

COMING MEETINGS

American Physiological Society, Baltimore, Dec. 27-30.
American Public Health Association, Havana, Cuba, Dec. 4-9.
Southern Surg. and Gynecol. Assn., Washington, D. C., Dec. 12-14.
Western Surg. and Gynecol. Assn., Kansas City, Mo., Dec. 18-19.

AMERICAN ASSOCIATION FOR THE STUDY AND PREVENTION OF INFANT MORTALITY

Second Annual Meeting, held in Chicago, Nov. 16-18, 1911

The President, PROF. CHARLES RICHMOND HENDERSON, in the Chair

About 500 people—physicians, nurses, social workers and others interested in infant welfare—attended the opening session. The first meeting was a session of the Section on Nursing and Social Work, over which Miss Lillian D. Wald of New York presided.

Infant Welfare or Milk Stations

MISS MINNIE H. AHRENS, of the Chicago Infant Welfare Society, MISS HARRIET L. LEET, of the Cleveland Babies' Dispensary and Hospital, and MRS. W. H. BARTON, supervisor of the milk stations of the department of health of New York City, read papers on this subject.

DISCUSSION

DR. GEORGE W. GOLER, health commissioner of Rochester, N. Y.: Has not the time come to attack the milk stations instead of supporting them? In building up milk stations, we have been losing sight of the fact that the real duty of the legal authorities is to compel the production of milk that is safe to be used by everyone, as the milk stations at best supply only a small portion of the clean milk that is needed. Cities should no longer have laws that soothe but laws that compel, and their enforcement should be insisted on.

Infant Mortality from the Point of View of District Nursing

MISS M. LOANE, through Miss Foley, presented a paper giving the conclusions from several years' experience in district nursing in various parts of England and discussing the result in infant mortality of illegitimacy, reckless marriages and bad housing, showing that the waste of infant life is not all due to poverty or lack of leisure.

Cooperation in Nursing and Social Work

MISS HIGGINS, secretary of the Associated Charities of Boston: The task of a nurse is to make healthy citizens of good character; the task of the social worker is to make good citizens with healthy bodies. The time was when doctors and the medical group thought they could plaster health on to the individual; now they find that they must work with Nature—exercise, fresh air, good food, etc. The social workers are trying to present an opportunity for the people to benefit themselves and are using encouragement and persuasion to see that the opportunity is taken. They have changed their methods, but the doctors, the nurses and the social workers have not recognized that these changes should bring them more closely together. If the social workers have thought of the community too much, doctors have thought of the community too little. After five years of cooperation in Boston the doctors have said that the social history helps them in medical diagnosis. Social work is also of value in treatment. Social workers can have children sent to the hospitals or persuade people to have operations done which the doctors could not do. This work is also valuable in the after-care. The doctors and the social workers have been trying to find a disease that has no social significance, but it has not been found. Surgery, tuberculosis, debility, venereal diseases, alcoholism, all have their social significance. Of mothers whose parents had been total abstainers, 91 per cent. were able to nurse their infants; of mothers whose fathers had been moderate drinkers, 88 per cent. were able to nurse; of those whose fathers were heavy drinkers, 31 per cent. were able to nurse their children and of those whose fathers were drunkards, only 10 per cent. were able to nurse their children.

DISCUSSION

DR. HENRY B. FAVILL, Chicago: The medical resources known to the world are not sufficiently available to the poor. The difficulty is that the machinery of society has broken down at the point of contact of acquired scientific knowledge and its application to the mass of the people. This is nobody's fault in particular. Up to recently the agency of administration of medical relief by which was included, advice, etc., has been the local physician, who, in that respect has not been a success. Many reasons have contributed to this unfortunate fact—the ignorance of physicians, the multitude of struggling, low-grade physicians, and lack of intelligence and education among the people.

Visiting Obstetric Nursing

MISS CAROLYN C. VAN BLARCOM, executive secretary of the Committee on Prevention of Blindness of the New York Association for the Blind: The problem of infant mortality is to be solved through intelligent motherhood and the keynote of the work is to teach mothers how to care for themselves and their infants. Fifty per cent. of births in this country are attended by midwives who are mostly untrained, ignorant women, and much unnecessary death, blindness and mental and physical degeneracy result. In England, through the laws creating the Central Midwives Board much improvement has resulted in infant mortality and morbidity. In this country, midwives are neither trained nor supervised, although in New York City a training school has been started in connection with Bellevue Hospital and an attempt has been made to register midwives.

DISCUSSION

DR. RACHELLE S. YARROS of Chicago: The midwife cannot be abolished at the present time. A large proportion of the women of foreign birth demand midwives. The thing to do is to improve the quality of the midwives, possibly by having obstetric nurses or other trained nurses with normal cases. A great need is for the attendance of either physicians or trained nurses at moderate fees for the great middle class.

Other Papers

Among other papers read at this meeting were "The Relation of District Nursing to Infant Mortality," by MISS AMY HUGHES, general superintendent of the Jubilee Institute for Nurses, London, Eng. This paper was read by Helen Scott Hay, superintendent of the Illinois Training School for Nurses; "Rural Problems in the Prevention of Infant Mortality," by MISS ELLA PHILLIPS CRANDALL, Columbia University, New York, and a paper on "Maternity Hospitals," by MISS MARTHA M. RUSSELL, of Sloane Maternity Hospital, and MRS. REGINALD FOSTER of Baltimore.

In the evening session, which was really the opening session of the meeting, the president of the association, Professor Henderson, read his address.

The Interests of Society in the Protection of the Mother and Child

PROF. CHARLES R. HENDERSON, Chicago: We are not founding a new society but promoting the oldest human social group: the mother and her child, which is more primitive, more fundamental than any other institution in society. First of all, the mother has her rights for which we must stand and invoke all the forces of the constitution, laws and governments. She has the right first to a home, and we must improve our economic conditions so that she may receive adequate support and be surrounded by such physical conditions as to preserve her own health and that of her child in the home as well as in industrial occupations. Before and after confinement she must have rest and must be provided with the necessary means to procure it. Hitherto she has had no resources but charity and the results of scant thrift, and some form of insurance must be found for the deserving cases. The baby has moral rights which should be transferred into legal rights. It has the right to be registered and from the time it is born through all its life it has a right to its name and place in citizenship, for without these all

its other rights are lost or rendered uncertain. They cannot be maintained unless there is registration at the time of its birth. The child of the unmarried mother and the mother herself should be protected by all the power of legislative organization against the neglect of the father, who ought to be sought to the ends of the earth and brought back to the task of supporting the child. The charitable and public and private associations can do much. What we need is someone who is responsible for every dependent child and who stands with the power of the courts back of him to interpret his duty to see that the task is performed to protect the baby's rights. Society also has rights. Eugenics stands for the rights of society, for the rights of the mothers to be healthy and for the rights of the infants to be well born. Society's rights are for the future. The rights of posterity must be protected. Society must have something to say about those who should not be born.

Municipal Measures Against Infant Mortality in Chicago

DR. GEORGE B. YOUNG, commissioner of health of Chicago: Most of the measures in Chicago directed against infant mortality have been aspirations rather than achievements. Complete and accurate registration of births is absolutely necessary before any real beginning can be made to study the causes and the means of preventing infant mortality. At present, 17 per cent. of the milk coming to Chicago is illegal milk, as it is neither pasteurized nor from tuberculin-tested cows. Efforts will be made to amend this and if free milk cannot be provided then the milk obtainable will be as good as can be obtained under ordinary municipal regulation. The methods employed do not try to prevent largely, but try to correct; this is a vital fundamental error; but along lines of correction something has been done; a start has been made in the work of child hygiene. In the beginning, fifteen nurses were provided and they joined hands with various associations for infant welfare already established in the city and better results were obtained by reason of this cooperation. Enough nurses to cover twenty-five of the thirty-nine wards of the city have been provided but in only ten was intensive work done. That this work means something is shown by the fact that the nurses made 38,335 calls and 20,041 revisits. As the result of this work in the last year the reduction in the deaths for the three months, July, August and September, as compared with the year before was 362, of which 311 occurred in the wards covered by the visiting nurses. The diminution in the death-rate was much better in the wards covered intensively. The reduction was 25.41 per cent. as against 15.5 per cent. in the other wards. Various means of an educational nature have been employed in the way of posters in the different languages, leaflets, moving picture shows, etc., and following the lead of New York we have started Little Mothers' Schools in which it is attempted to teach the elements of infant hygiene and care of the baby. It is expected to inaugurate forty-eight of these schools soon. Mothers' conferences have also been begun in the congested foreign districts where the mothers can come and consult the physicians who lecture and explain matters. The health department is willing to do everything possible but it is up to the citizens to say whether the work shall be given proper financial support.

The Illegitimate Child

DR. H. HASTINGS HART, director of the department of Child Helping, Russell Sage Foundation, New York, presented an elaborate, constructive plan for the prenatal and postnatal care of these infants and their general supervision up to the time of their becoming self-supporting citizens.

In the section of Eugenics, in which great interest was manifested, a number of papers were read and resolutions on certain subjects were reported to the general meeting at the afternoon session.

Eugenics and Infant Mortality

MR. ROSWELL JOHNSON, Bartlesville, Okla.: The movement for universal infant conservation is in direct opposition to the action of natural selection, but no discriminating measures are at present justifiable. The efforts against infant mortality must be continued. Sexual selection and fecundal selection must take the place of natural selection, the union should be based on worth and fitness for parenthood. Parents of superior stock should be encouraged to have large families. We must look to the physician mainly to exert the proper influence in the interests of sexual and fecundal selection.

The Hereditary Effects of Venereal Diseases and Their Relation to Infant Mortality

DR. PRINCE MORROW, New York: The problem of infant mortality is as much, perhaps more, a biologic than a medical problem. Environmental conditions are important, but the dominant influence must be assigned to the hereditary make-up of the individual. The social diseases have a special significance in relations to eugenics in that they specifically affect the system of generation, producing a race of inferior beings, on account of a lack of "biologic capital."

Hereditary Tuberculosis and Infant Mortality

PROF. H. E. JORDAN of the University of Virginia: The inheritance of a predisposition or tuberculous diathesis is an important fact. There is no basis for the dogma of certain health leagues that tuberculosis is not hereditary in this sense. Prof. Karl Pearson furnishes most cogent proof that the phthisical diathesis is just as hereditary as any human characteristic we know about, and that it is more important than direct infection in families. Despite the vastly greater opportunity for direct infection between husband and wife as against brother and brother, the correlation coefficient in the former case is not more than 0.17 or 0.25 maximum, while in the latter it is from 0.40 to 0.50. The further fact that about 38 per cent. of all tuberculous patients in sanatoriums come from tuberculous families is also significant of the transmission of a predisposition to the disease.

The section on Midwifery was presided over by Dr. Mary Sherwood of Baltimore.

The Midwife Problem and Medical Education

DR. J. WHITRIDGE WILLIAMS, professor of obstetrics in Johns Hopkins University, presented a paper which was read by Dr. Frank W. Lynch of Chicago. Dr. Williams as the result of replies to a questionnaire containing fifty questions sent to teachers in obstetrics in the medical colleges throughout the country draws some conclusions which constitute a severe arraignment of the methods and results of teaching obstetrics in this country. The paper will appear in THE JOURNAL.

DISCUSSION

DR. JOSEPH DELEE, Chicago: The indictment of the medical schools by Dr. Williams is true, but the principal cause is a matter of money. The public does not respect the obstetrician and will not pay him adequately. His standard is not so high as that of the surgeon. This lack of consideration for obstetrics extends through the hospitals and medical schools and the young men will not become either obstetricians or teachers, but go into surgery and gynecology, which are better paid. The elevation of the standard of obstetrics in the opinion of the public first and in the schools afterward is the demand. When the women demand a better standard of service and cease employing midwives better service will be provided. This education of the women can be assisted materially in the women's clubs throughout the country. Maternity hospitals of high class must be established more universally in which nurses and physicians can be practically trained in obstetrics. This will naturally abolish the midwives.

DR. RACHELLE S. YARROS, Chicago: The conclusions of Dr. Williams were true, but the public must demand good work and it will get it. The midwives, objectionable as they are, cannot at present be abolished, I believe; but if they are, then lying-in hospitals must be established where the expense is not great and the women educated to go to them in the instances, chiefly among the foreign population, in which they now demand midwives. As a measure of expediency and as an improvement over the midwife I recommend the education of the trained nurse to take care of normal cases, or to work as assistant with the obstetrician.

DR. FRANK LYNCH, Chicago: I believe that a little explanation of some of the conclusions of Dr. Williams is needed to an audience composed largely of laymen. In the medical schools of this country there are men of all grades. Real medicine began, it might be said, only about sixty years ago. Good surgical work began as recently as twenty years back. This paper, making a summary of obstetrics, includes the old and the young teachers and obstetricians, and the young men are in the better position. The paper is true, but the statements must be qualified. Not all graduates go directly into practice; many go into hospital work and get experience. One school in Chicago practically insists on a year of hospital work, for which they give a degree of honor. Until the public knows how to choose a physician there is no hope for good obstetrical teaching. What is wanted is trained men, not operating-rooms. The way to get good teaching is to pay properly equipped men for teaching the young physicians.

Has the Trained, Supervised Midwife Made Good? Shall Midwives be Licensed or Abolished?

DR. JAMES LINCOLN HUNTINGTON, Boston, sketched conditions in foreign countries where they have trained, supervised midwives, as in England and Germany, where the results are said to be unsatisfactory. America has no laws concerning midwifery, but they should be abolished and not licensed. The Boston lying-in hospital with out-patient service, assisted by the public and social workers, seems to have solved the problem.

DISCUSSION

MRS. WILLIAM LOWELL PUTNAM of Boston presented a scheme for assistance in this work by lay women, and described such an organization which is doing good work in Boston.

MRS. UPHAM of the Chicago Lying-In Hospital and Dispensary, also described the work done by an organization of about 500 Chicago women in an educational way along these lines.

DR. GEORGE W. WEBSTER, president of the Illinois State Board of Health: I called the attention of the National Federation of State Boards, in 1904, to the facts disclosed by Dr. Williams. The time devoted to obstetrics in some schools amounts to 150 hours. There are schools in which the time devoted to obstetrics in the entire four years' course is only sixty hours. There are only thirteen states in the Union having laws in any way governing the licensing and control of midwives. In fourteen states the law says that the provisions of the medical practice acts shall not apply to them. In all other states the laws are silent on this subject. I am convinced that the question is not wholly an educational question, but an economic question. In Chicago the services of a midwife may be obtained for $2.50, and if the service is as good as that of the physician, as Dr. Williams says, they cannot be blamed for accepting the service. We must supply something good at an equally low price. We cannot legislate midwives out of existence any more than we can poverty, drunkenness or crime.

DR. EVANS, New York: The average cost of the attendance of a midwife in New York is from $5 to $10. Contrast this with the service rendered by the lying-in hospitals and dispensaries. The 50,000 births attended by midwives would pay for better service for the whole city and allow of the use of this material for teaching purposes.

Schools for Midwives

The paper of DR. S. JOSEPHINE BAKER, director of child hygiene, health department, New York, was read by Miss Carolyn C. Van Blarcom. There are 1,400 midwives registered in New York, but this is probably not half the number practicing. The midwife is usually an ignorant, untrained woman, and the average cost of her services is $8. Criminal practice among the midwives is on the same footing as in the case of the physician. The laws concerning the midwives' schools in Europe are old and have not kept up with other medical work. Denmark and Germany have advanced. In France midwives are trained but they are not controlled afterward. The school started in New York for the training of midwives, in connection with Bellevue Hospital, has a six-months' course, three months of which are spent in the house where the midwives are taught obstetrical nursing, how to make a diagnosis, the principles of breast-feeding, cleanliness, etc. The second three months are spent in the homes of patients, where under the supervising nurse or the physician the midwife is taught to apply what she has learned in the school. The idea is to establish more of these schools and legalize their registration and licensing by the state.

DISCUSSION

MISS C. VAN BLARCOM, New York: I do not agree with Dr. Huntington and Dr. Lee; I believe that the English system is going to make for better health of the children and their mothers. I have just returned from a study of the working of the system there. The sentiment there is in favor of training midwives. The movement was started by the London Obstetrical Society thirty years ago, which is significant. It has the support of all the expresidents of the Royal Obstetrical Society, of Dr. Osler and others. The question is one of better care. Two standards of obstetrics are not desirable. The object is not to invade the province of the doctor, but the problem is one of securing adequate attention and care.

DR. C. S. BACON, Chicago: I believe if it is possible to abolish the midwives it would be well. In America each state can institute experiments and the whole country can profit by them. Whatever may be done in Boston or in Massachusetts, I believe that in New York and Chicago the abolition of the midwife is absolutely impossible. As to midwife schools, if this matter is not to be allowed to go without any attention, there must be schools for midwives. It is doubtful whether the medical colleges can go into this work, but a university, which has its medical and other departments, can properly have a department of midwifery.

DR. R. S. YARROS, Chicago: It is important to have something done for the benefit of the people who cannot have regular physicians but must have midwives. It is not alone a question of elevating the standard of obstetrical teaching.

DR. J. W. SCHERESCHEWSKY of the U. S. Public Health and Marine-Hospital Service introduced a resolution, which was adopted by the section, to the effect that the teaching of obstetrics in the United States is at present inadequate and that no time should be lost in elevating obstetrics to the importance at least accorded to medicine and surgery; investigation of local midwife conditions was urged as a means of obtaining information; that the extension of outdoor obstetrical service be advocated as a method of preventing disease and a high mortality-rate.

(To be continued)

UTAH STATE MEDICAL ASSOCIATION

Annual Meeting, held at Salt Lake City, Oct. 4-5, 1911

The President, DR. FRED W. TAYLOR, in the Chair

The Bacteriology of Diphtheria

DR. R. W. ASHLEY, Salt Lake City: In diphtheria the earlier the diagnosis the better for the patient and the community. A culture taken from the throat will in twelve hours, often less, clear up the diagnosis and indicate the treatment necessary. During the past year in Salt Lake City 25 per cent. of all cases of diphtheria on record at the board of health were discovered by the examination of cultures taken from the throats of children, previously ill, and seeking to obtain permits to return to school. The diagnosis in each case, previously made by the attending physician, was "sore throat" or "tonsillitis." Effective quarantine in all cases should be regulated by bacteriologic examinations, and every patient infected should be isolated until the bacilli have entirely disappeared. In the average case this requires about two weeks. Mild cases do not always remain mild, and every year many children die of diphtheria while being treated for "sore throat" or "tonsillitis." Every case of sore throat should be looked on with suspicion, as a contagious disease, until it is proved otherwise. Cultures taken from the throats

of 4,146 school children in Boston, a few years ago, showed that 1.33 per cent. harbored the Klebs-Loeffler bacillus; and a second examination, a week later, of 4.087 cultures, showed that 0.93 per cent. were positive. Later, 298 absentees, new pupils, etc., were examined and nine were found positive. In the grand total out of 8,531 throats examined, 1.16 per cent. were found positive.

DISCUSSION

DR. R. C. SMEDLEY, Salt Lake City: An army officer at Manila reports that his own daughter was a diphtheria carrier for a great many months, and that large quantities of antitoxin were administered, but without causing the bacilli to disappear from her throat. From a swab of the throat an almost pure culture of the staphylococcus was obtained, and an antitoxin derived from this strain and administered in the usual way brought about very gratifying results in a short time.

DR. F. S. BASCOM, Salt Lake City: I desire to emphasize the necessity of care and watchfulness in every case of sore throat. A boy was brought to me by his mother complaining of a sore throat. Examination showed a throat but slightly congested. I had committed myself in saying that I did not consider the condition serious, when the mother informed me that the city bacteriologist had pronounced the case diphtheria. The child was kept under observation, and within a week later there was unmistakable evidence of diphtheria. This case might have gone unprotected had the organism not been discovered.

Foreign Bodies in the Orbit

DR. L. W. SNOW, Salt Lake City: A boy, aged 5, was struck in the right eye with a grain of wheat, blown by a companion through a hollow cane. Two weeks after the accident, the eye was inflamed and painful; the only visible evidence of an injury was a small corneal ulcer on the nasal side of the pupil. There was no indication that the object had entered the eye-ball. A severe panophthalmitis developed, and within three weeks from the date of the injury the eye was hopelessly lost. Then a kernel of wheat, swollen and beginning to germinate, came out from some part of the orbital cavity. Symptoms of sympathetic irritation in the sound eye indicated the necessity of an immediate enucleation. The injured eye-ball was found filled with pus.

A boy, 2½ years of age, fell with a lead pencil in his hand. An inch or more of the pencil passed through the upper lid into the orbital cavity. Immediate surgical aid was sought. The wound was adequately enlarged and several pieces of wood and lead were removed but the point of the pencil was not found. I saw the child the next day and, under chloroform anesthesia, examined the wound carefully. Several small pieces of wood were removed. Two years after the accident the eye appears normal in every respect.

A boy, 2 years old, fell from a fence on a broken willow twig that passed through the lower lid of the right eye. A large piece of wood covered with bark was removed from the orbit, but the wound discharged for two months, when I saw the patient for the first time. A fistulous tract was curetted, considerable diseased tissue was removed, but no foreign body was discovered. The wound discharged at intervals for more than a year, and several particles of bark came away. Last February I made a free incision through the wound, near the lower border of the lid, and explored the posterior part of the orbit. Considerable bark and a small pocket of pus was found. A drain was introduced and a prompt cure followed.

Tonsillotomy and Tonsillectomy

DR. F. W. STAUFFER, Salt Lake City: Before attempting any operation on the tonsil a careful diagnosis is important, to determine the extent of the disease and the effect, if any, on the general system. Operations before 15 should be conservative, barring, of course, cases of tuberculous cervical glands and general systemic infections. In these cases complete enucleation of the tonsil in its capsule is the proper procedure even in childhood. The ideal operation would be the removal of all tonsillar tissue, including the crypts, but leaving the capsule in place, except where there are signs of tuberculous or general infection, or where there are tuberculous deep cervical glands. It is also imperative in frequent attacks of quinsy. A simple and effective method, in general, is to remove as much of the diseased tonsil as possible with some form of tonsillotome and a punch to remove any diseased crypts remaining. The pendulum has swung to the extreme limit in radical tonsil surgery and it is hoped it will not react too strongly toward conservatism. There is a rational middle ground determined by reason and judgment.

DISCUSSION

DR. R. R. HAMPTON, Salt Lake City: I advocate the complete removal, or tonsillectomy. I doubt if only the diseased part of a tonsil, the diseased crypts, can be removed. The crypts run down and branch out, and a few infected crypts left behind would mean recurrence in time. Sixty per cent. of tonsils are removed on account of mechanical interference with the functions of the nose and throat. I have never observed any ill effects following complete tonsillectomy. The worst cases of systemic infection that I have seen have occurred in the deeply buried variety of tonsil; in one case of this type acute Bright's disease developed one month later. It is in this type also that one most commonly finds caseous plugs embedded in the crypts.

DR. A. R. IRVINE, Salt Lake City: European surgeons are beginning to adopt the radical operation on account of the frequency of relapses after incomplete removal of the tonsil, especially in cases in which systemic infection can be traced to tonsillar infection.

DR. W. M. STOOKEY, Salt Lake City: The tonsil question will not be settled definitely until the function of the tonsil is positively known. I believe in the complete removal of the tonsil. In my experience the results have been proportional to the completeness of the operation. Unless the tonsils of very young children seriously interfere with the functions of the throat, they should not be disturbed. As only a microscopic examination could reveal the extent of infection in a diseased tonsil, I do not believe that the diseased part could be removed alone.

Congenital Idiopathic Dilatation of the Colon: Hirschsprung's Disease

DR. J. F. CRITCHLOW, Salt Lake City: Some unusual features of this rare disease were noted in a case coming under my care. A man, born in Sweden, age 42, occupation mine-foreman, entered the hospital suffering from severe shock, abdominal pain, nausea and vomiting, with the history that his present illness began about forty-eight hours previously, with great abdominal pain, colicky in character. All efforts by his attending physician to secure any bowel movements by the use of cathartics or enemas had failed. He expelled no gas since the onset of the symptoms, and singultus was present. One year previously he had a very severe similar attack. Since then he has had attacks of colic of moderate severity about once a month, with no vomiting, and relieved by cathartics. His expression was anxious, his face covered with cold sweat; pulse 110, rapid and weak; temperature 99.2 F; breathing shallow. Examination of the abdomen revealed great distention, extending from the pubes to the rib-margin, equally resonant throughout, except some dulness in the flanks; no mass was palpable. Examination of the urine showed nothing abnormal; specific gravity, 1,028.

A median incision below the umbilicus was made, followed by a gush of clear fluid from the abdominal cavity. A large, smooth, tense, purple bowel presented in the wound. Its great size, and the longitudinal band, enormously widened, identified it as some portion of the colon. Extending the incision to the umbilicus, and introducing the hand, a startling condition was disclosed. What seemed to be the ascending colon extended perpendicularly from the pubes to the diaphragm, curved backward under it and back again to its source near the left side of the bladder, making two parallel arms of a loop filling both iliac fossæ as well as the upper abdomen; both arms of the loop came together near the bladder, forming an elipse of enormously dilated gut. Distention was due mainly to gas, yet weighted down with semi-fluid material. On the anterior surface, midway up the associated

arms, was discovered a firm bridge of tissue and attached to the anterior abdominal wall above the umbilicus by recent adhesions. The viscus was tapped and drained of volumes of putrid-smelling gas and liquid, and two basins of blood-stained feces, to facilitate delivery of the gut through the incision. The hole in the bowel was sutured and the gut delivered through the wound. It was then discovered that there still remained in the abdomen a normal ascending, transverse, and descending colon to a point 3 or 4 inches below the splenic flexure. At this point the colon passed in front of the other arm, becoming enormously dilated, and passed up the right and down the left of the abdomen to the rectum, the dilatation ceasing at this point. The loop of tissue mentioned proved to be a "monstrous" arrangement of the mesentery. It was a complicating volvulus, resembling a giant horseshoe on a rubber pad. When the true condition was recognized, resection of the affected portion was undertaken. The descending colon and upper rectum were sutured end to end and drainage provided. The patient was in poor condition when he left the table. Hypodermoclysis and other supportives were exhibited. The patient succumbed to shock, thirty-six hours following the operation.

DISCUSSION

DR. J. E. TYREE, Salt Lake City: One of the striking features of this case was the deep pigmentation of the tissues, indicating a chronic process. The pigmentation might be due to either bile in the intestinal contents or extravasated blood into the intestinal wall and mesentery. Hypertrophy of all of the coats of the intestine was present, excepting the serosa. Hypertrophy and hyperplasia involving the circular and longitudinal fibers of the muscular coats were very pronounced possibly indicating the continuous effort of the bowel to empty itself.

DR. O. B. FOWLER, Denver: I have a case of this kind now under observation. The subject is a man 44 years of age. By the administration of bismuth by the mouth, and injections of bismuth into the rectum, and the employment of the Roentgen ray, we have been able to make a positive diagnosis. The patient suffers from well-marked symptoms of auto-intoxication. He has often gone for weeks without a movement of the bowel. To cure this condition, we expect to do a resection of the bowel.

(To be continued)

PHILADELPHIA COUNTY MEDICAL SOCIETY

Meeting held Oct. 11, 1911

The President, DR. C. B. LONGENECKER, in the Chair

Preventive Medicine: Present Achievement and Future Field of Activity

DR. D. H. BERGEY: Some of the more important measures employed in preventive medicine are isolation, disinfection, immune serums, vaccines, chemotherapeutic agents, and the chemical, physical and biologic agents used in the purification of water, sewage and milk. The efficiency of isolation is frequently defeated through neglect of proper care on the part of physicians and nurses. Disinfection is often ineffectual because inefficient materials are employed in too great dilution or for insufficient time. The prophylactic value of diphtheria and tetanus antitoxin has been demonstrated repeatedly. The great value of vaccine virus in warding off smallpox, and the value of vaccine in eradicating typhoid, cholera, plague and dysentery cannot be estimated. Of the chemotherapeutic agents, quinin in malaria and salvarsan in syphilis are of great value in limiting disease and death. The great activities of laboratory investigators lead us to hope that other valuable chemotherapeutic agents may soon be discovered. The filtration of water and sewage and the pasteurization of milk serve to reduce the morbidity and mortality rates, not only of the diseases of the gastro-intestinal tract, but the general mortality rates in communities where these measures are employed.

The important diseases which are still not under satisfactory control are scarlet fever, measles, pneumonia and tuberculosis. The careful application of the preventive measures, now in our hands, will serve to control more effectively these great scourges of humanity. It is probable that the day is not far distant when we shall have more efficient prophylactic measures in the form of vaccines, immune serums or chemotherapeutic agents to control the latter diseases.

DISCUSSION

DR. B. A. THOMAS: I must take exception to Dr. Bergey's statement that immune serums other than antidiphtheritic and antitetanic are valueless. Any one having had clinical experience with the use of antigonococcic serum must be convinced of the great value, therapeutically, of this agent in acute, subacute and, to a less degree, chronic gonorrheal synovitis. In view of the failures to produce an efficient antistaphylococcic serum, about two years ago I endeavored to immunize a ram by suspensions of dead staphylococci followed by living suspensions. A polyvalent suspension of eighteen varicus strains from abscesses, furuncles and carbuncles was used. The animal was highly immunized, employing the opsonic index as a guide. At the conclusion of four months the ram was bled to death and the serum collected and sealed in a sterile ampulla. I have used this serum in two or three dozen cases, including bacteriemia, recurrent furunculosis and aggravated carbunculosis, and in the majority of cases with immediate benefit. I am inclined to think that the therapy of the future in these cases may be the administration of serum in the acute attack because of its more immediate effect, followed subsequently by the autogenous bacterin for purposes of more prolonged immunization to prevent recurrences.

DR. LEONARD D. FRESCOLN: Our necessary association with the lower forms of animal life might be dwelt on in this connection. The ordinary house-cat is often the means of spreading ringworm and favus. The dog has been referred to in spreading hydrophobia, and in Australia there is a six months' quarantine on newly arrived dogs. This brings up the question of municipal and government control. Our country is behind some other great nations in this matter of regulation in the way of controlling carriers of disease. It is an easy matter to report transmissible diseases by postals furnished by the city; then early fumigation with formaldehyd, etc., may be begun and the root of the matter struck. Practitioners should endeavor to detect and report cases of scarlet fever, tuberculosis, etc., early.

DR. A. C. ABBOTT: The foundation-stones of the structure called modern preventive medicine were in a very large part laid by men who were not practitioners of medicine in the ordinary sense of the term, and whose education and interests had comprehended subjects other than those strictly medical. For instance, Pasteur, to whom we owe so much, was not identified with practical medicine, though the value of his researches to problems of preventive medicine cannot be overestimated. Metchnikoff, whose doctrine of phagocytosis has done so much to elucidate the problems of immunity, is not a medical man but a zoologist who realized the importance of particular lines of zoologic investigation to some of the riddles of medicine. Koch, one of the masters of medicine, we find in his youth while pursuing a country practice, supplying himself, through work in special lines of investigation, with knowledge that had not been included in his medical course; knowledge which he regarded as necessary to the problems that he proposed to undertake. Ehrlich, it is true, is a medical man, but it is alleged that he was regarded at the University of Berlin as one of the poorest medical students that had presented himself for examination, and had it not been for the brilliancy of researches already done, in branches related to medicine, doubt has been expressed that he would have received his medical degree. Had Dr. Meigs, who wrote those classical papers on malaria, been educated more broadly in the fields of natural science, it might not have been necessary for us to wait for the discovery of the cause of malaria until the matter was taken up by Laveran. Carlos Finlay, a practitioner of medicine, did, however, possess knowledge and interest which led him to pursue studies not strictly medical. His observations enabled him to offer suggestions that must be taken as the

humble beginning of a glorious end, surely one of the triumphs of modern medicine, the revelations on yellow fever that have led to its control.

The problems of modern preventive medicine demand an education quite different from that offered or required of the medical student a few years ago, and to this end a modification of the curricula of our schools is imperative. Demands are everywhere being made for broader preliminary training, and it is a pleasure to note that they are being met. Given students possessing broader understanding of the natural and physical sciences, it is possible for the teaching in our schools to be so ordered as to meet the demands of the times; without students so equipped such teaching is ineffective and wasted.

DR. AARON BRAV: In considering the various processes and mode of infection from the viewpoint of prevention we should think at once of the common drinking-cup of our schools. Hundreds of children are compelled to drink from a cup that has probably not been cleansed during the entire season. This evil should be remedied by the board of health. A sterilizing plant could be devised for the correction of this very obvious danger.

Diphtheria Antitoxin and Anaphylaxis

DR. JOHN A. RODDY: The regularity with which first injections of horse-serum sensitize guinea-pigs, and the severe manifestations of anaphylaxis and high mortality which usually follow second injections of horse-serum are no proofs of an inherent danger of therapeutic sera administered to man. Human beings are less frequently sensitized by serum than guinea-pigs; when hypersusceptibility is caused by the injection of horse-serum into man it is usually developed to a less marked degree than in guinea-pigs. When a second injection of horse-serum into man is followed by anaphylactic phenomena, the symptoms differ considerably from those manifested by anaphylactic guinea-pigs. They are usually less sudden in onset, of a very much less violent character and very rarely fatal or productive of any irreparable harm. Ill effects, other than those of anaphylaxis, hardly ever follow the proper use of therapeutic sera to-day. Among more than 15,000 patients treated by J. C. Wilson, S. Woody, R. Brundage, H. Price and J. P. Kerr, and receiving a single injection of diphtheria antitoxin, not one showed any ill effect whatever. Of about 10,000 patients treated by the same physicians less than 150 showed symptoms of anaphylaxis after receiving a second injection of diphtheria antitoxin. In most cases the manifestations were mild. All recovered from anaphylaxis but two. Two died probably as a direct result of induced hypersusceptibility to horse-serum. Seventy per cent. of all diphtheria patients who are given a first injection of less than 20,000 or 30,000 units of antitoxin, do not have all the toxin neutralized and consequently need a second injection.

DISCUSSION

DR. DANIEL M. HOYT: I have been particularly interested in noting how small the danger is from the use of antitoxin. A strong argument is presented against legislation adverse to this life-saving measure. If a person has been an asthmatic, antitoxin should be administered with great caution. In a paper published by Gellette (*Therap. Gaz.*, 1909, xxxiii, 159) twenty-eight cases are cited of severe general reaction following the use of antitoxin. Of these cases fifteen were fatal; in eighteen, nine of which were fatal, there was a history of asthma. While not an argument against the value of antitoxin, it is obvious that the histories of our patients, particularly in the administration of immunizing doses in a household, should receive careful inquiry.

DR. B. A. THOMAS: The guinea-pig is a poor criterion for the study of anaphylaxis in the human being. The comparative symptomatology is so variable. Certainly the danger from anaphylaxis or hypersusceptibility is no cause to contra-indicate the intelligent use of serum, antidiphtheritic or otherwise. Relative to diphtheria antitoxin, the profession has come to realize the inefficiency of the old small dosage. I am of the conviction that in the case of other immune serums, notably antitetanic serum, the dose is still too small for curative purposes. I believe anaphylaxis is a much overexaggerated occurrence. It has been my province to immunize, both actively and passively, several hundred persons during the past five years, and with one or two exceptions, I have never seen a case of hypersusceptibility, the exceptions being mild reactions and unworthy of note.

DR. SAMUEL WOLFE: A clear investigation might demonstrate that anaphylaxis is comparatively more frequent where diphtheria antitoxin is used for prophylaxis or in doubtful cases, as in such it does not come in contact with the causal factors of the disease and must expend itself without being neutralized. A chemical antidote and a physiologic antitoxin however, could hardly be regarded as comparable.

A Bacteriologic Study of Cultures Made From the Thyroid

DR. JOHN J. GILBRIDE: The frequent occurrence of Graves' disease in certain districts of Europe and this country, and the acute exacerbations occurring in the course of the disease are facts of special interest, as is also the occurrence of the disease in several members of the same family. I undertook to determine whether infection plays a rôle in the etiology of hyperthyroidism. The cultures were made according to the method of obtaining cultures from tissues at autopsy. They were made from the thyroid at the time of operation. Cultures were made from fourteen cases of goiter, six of exophthalmic goiter and eight of cystic goiter. A growth was obtained from the culture in two cases. In one, a case of exophthalmic goiter, the *Micrococcus tetragenus* was found; in the other case, one of cystic goiter, the *Streptococcus vermiformis* of Sternberg was discovered.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POST-GRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

NATIONAL W. C. T. U. ENDORSES A NATIONAL DEPARTMENT OF HEALTH

The Women's Christian Temperance Union has endorsed in no uncertain terms the establishment of a national department of health. The following account of this action and a copy of the resolutions adopted have been received from Mrs. Martha M. Allen, National Superintendent of Medical Temperance, Forest Hills Gardens, Elmhurst, L. I., N. Y.:

The National Woman's Christian Temperance Union held its annual convention recently in the city of Milwaukee. Preceding the convention letters were sent to the general officers of the society from the president of the National League for Medical Freedom, and from other persons interested in that league, seeking to influence the convention against taking any action in favor of a national department of health. One writer even asked permission to address the convention on the subject. A committee, consisting of Mrs. Margaret Dye Ellis of Washington, D. C., superintendent of legislative work; Mrs. Martha M. Allen, superintendent of medical temperance, and Dr. Louise Purington of Boston, superintendent of health and heredity, was appointed to formulate a reply to these letters. The reply was the following resolution which was passed by the convention without a dissenting voice or vote:

"We cordially approve of the movement for a national department of health at Washington, believing that such a department would be in the interest of the people in matters of pure food, unadulterated drugs and sanitation; that it would regulate the inspection of milk, meats and the water-supply, thereby leading to a lessened infant mortality and the prevention of disease.

"We urge this measure with the understanding that such a department shall in no sense represent any school of medicine."

That this resolution passed without a dissenting vote speaks well for the intelligence of the 500 delegates, for much effort had been put forth by the League for Medical Freedom to influence individual members adversely. Mrs. Allen was asked privately at the convention by many women for her opinion in the matter, and she replied that state and city boards of health had not proved "a menace to freedom," but had ren-

dered incalculable service to the people, and she saw no reason why a national department of health should be different in these respects. Asked if the American Medical Association is not a "trust," she replied "It cannot be a 'trust' as it has nothing to manufacture or sell. It is an organization for mutual help, as is our own organization."

SCHOOL HEALTH AND HYGIENE EXHIBITS

John B. Hawes, M.D.

Secretary of the Board of Trustees of Massachusetts Hospitals for Consumptives; Assistant Physician to Out-Patients, Massachusetts General Hospital

BOSTON

I have called the exhibits and charts here described "health and hygiene" rather than "tuberculosis" exhibits, for two reasons: (1) There still exists and will continue to exist for a long time to come a very strong, and to my mind not altogether unreasonable, prejudice against allowing children to be taught or shown anything that has to do with death and disease — even its prevention; and (2) the lessons to be taught the children by such exhibits and charts belong really to the broader subject of health and hygiene, and deal only indirectly with tuberculosis.

That the present teaching of hygiene and the rules of health in our public schools are either absolutely lacking or woefully inefficient cannot be denied. No amount of studying or reading even from such excellent schoolbooks as the "Gulick Hygiene Series," or talks from teachers, however well delivered, can impress on children's minds what can be easily and strikingly shown by a few simple pictures, photographs, diagrams or charts. I have never forgotten the pictures of the interior of the stomach of a man whose habits were, to say the least, not temperate, shown me by the principal when I was in one of the lower grades of the grammar school; there is no reason why pictures and charts far more instructive and infinitely less gruesome, or better still, cheerful and pleasant, should not be impressed with equal force on the minds of children to-day. Dr. Charles W. Eliot, in a recent address, called attention to the fact that our methods of teaching young children must be changed and that advantage must be taken of the fact that children can absorb and profit by what they can see long before they can gather much from reading or listening to others read or speak.

Prior to the year 1908, in Massachusetts, there was little or no teaching of hygiene or prevention of disease in our public schools. During that year, however, the legislature passed a law which made it compulsory that tuberculosis and its prevention should be taught in the schools. To supplement this law a committee of Boston physicians, at the request of the State Board of Education, prepared a short pamphlet on the general subject of tuberculosis, a copy of which was placed in the hands of all school-teachers in the state. I doubt very much if the passage of the law, good in itself, accomplished anything more than to add to the burdens and perplexities of the already overworked school-teacher. The need of some step of a practical nature was evident. Two years later, in 1910, the tuberculosis committees of the Massachusetts Medical Society introduced a bill into the legislature calling for an appropriation of $1,000 to provide for a small number of tuberculosis exhibits. This bill was passed and the preparation of these exhibits fell largely into my hands as secretary of the Board of Trustees of Hospitals for Consumptives.

The requirements of an exhibit intended to teach school children certain facts concerning tuberculosis, health, hygiene and prevention of disease, etc., are in my opinion somewhat as follows: A. The exhibit must be comparatively inexpensive, so as to be within the reach of towns and cities whose appropriation for school purposes is limited. B. It must be compact, so that it can be easily set up and transported from school to school and from room to room. C. The lessons it teaches must be of the simplest and most striking character.

I have tried, with what success remains to be seen, to meet these requirements as fully as possible. Our exhibit, as finally constructed after months of planning and experimenting, consists of a single large frame about 5 feet high, 4 feet wide and 4 inches thick. This frame is built of light but strong wood, and opens like a book, with pictures, mottoes, etc., arranged on the inside of each cover. There are strong hinges on the back, brass protectors for the corners and simple clasps in front, so that the whole thing can be shut up, locked, labeled and easily expressed to its destination. It can be moved about the room by one person and can be easily handled by two men.

The exhibit consists of forty-eight 8 by 10-inch frames which contain mottoes or photographs. There is a row of mottoes along the top and a similar row along the bottom. The pictures in the column underneath each motto are intended to illustrate what is said in that particular motto. For instance, underneath the first motto, "Crowded tenements where the windows are kept shut, where dirt and darkness abound, are breeding places for consumption," are four illustrations of the worst sort of tenement rooms. It is perfectly simple for any teacher to demonstrate what is wrong in the living conditions here shown and to demonstrate what should be changed to make them better. At the bottom of this column is the motto, "Health is the poor man's stock in trade. A tenement with sunshine and good air at $4 a week is cheaper than one without at $3 per week." The next column takes up the subject of dusty and dangerous trades and the part they play in producing tuberculosis. The motto at the top reads "Tuberculosis breeds in dusty, dirty and

badly ventilated workrooms and factories. There is no danger of tuberculosis in a properly ventilated and well-aired workroom." Pictures illustrating this show men at work at granite cutting and in an iron foundry, with clouds of dust, a dirty and poorly ventilated bakery, and, last, a machine-shop with ideal conditions where there is plenty of fresh air and light. Other mottoes call attention to the need of fresh air and sunshine, open windows, cleanliness, etc., and are illustrated by pictures showing methods of getting fresh air at home by means of balconies, tents in the yard, tents on the roof, etc.

There are two very striking pictures showing how milk is contaminated. A typical tailor sweatshop is compared with a room where conditions are as they should be. In the right-hand panel mottoes are devoted more toward the prevention of disease and are planned to demonstrate what children should do to keep healthy and strong. Such mottoes as "Keep the body clean and a cheerful mind; worrying doesn't mend matters," "Take time for regular rest, exercise and recreation; you will do better work," "The best way to treat tuberculosis is to avoid getting it," "The children shown in the pictures have not got tuberculosis, they are learning how to live so as to avoid getting it in the future," are illustrated by photographs of public baths, playgrounds, outdoor schools, and children taking their exercises out of doors, while attending our ordinary public schools.

The frames are firmly screwed into place and the pictures are covered with celluloid rather than glass. The total cost of this exhibit is $35. Out of our appropriation twenty such exhibits were made. A pamphlet entitled "School Tuberculosis Exhibit; Suggestions in Regard to its Use and Demonstration," was prepared by me and issued by the Board of Trustees of Hospitals for Consumptives. Copies of this pamphlet in sufficient numbers are sent along with the exhibit. These exhibits have been distributed throughout the state as widely as possible. Wherever possible, we have urged the local antituberculosis association, under whose auspices in almost every case the exhibit is managed, to buy the exhibit outright, thus providing us with funds to build others. Where this could not be done the exhibit has been loaned for a period of months sufficient to demonstrate it in all the schools. Nearly all of the twenty exhibits built from the original appropriation are loaned in different towns and cities in the state, while an equal number have been bought outright by various antituberculosis associations.

I have tried to make it clear to every one to whom we have either loaned or sold an exhibit that this is only an experiment and that, in many instances, changes and modifications should be made to suit local conditions. The ideal plan, in my opinion, for the demonstration and use of such an exhibit would be somewhat as follows: The exhibit is sent to a certain public school. At a given time arrangements are made with some physician well acquainted with the subject to meet the teachers and to explain and demonstrate the exhibit to them. It should then be set up in a schoolroom where it can be examined by the children in their leisure hours and demonstrated to them in small groups by the teachers, or, better still, by the school physician or school nurse. After one class has made a careful study of it, the children should be given an examination based on the lessons which they are supposed to have learned. The exhibit should then be sent to another room and the process repeated.

In order to get further information for future work along this line I sent a circular letter to all those who were using our exhibit asking their opinion as to its value, and suggestions as to how they would change or add to it. All my replies were unanimous in stating that the exhibit was of very great practical value. Worcester qualified this statement by saying it was good for pupils in the high school and down to the seventh grade of the grammar school. Clinton likewise said that it was not of value below the seventh grade. Fitchburg believed its value to be very great except to the youngest children. There was a general consensus of opinion that it was hard to handle and move around, and many seemed to think that with fewer and larger pictures it would do better work than in its present form; many made the suggestion that certain of the pictures could be easily enlarged and placed either on cardboard or linen backs so as to be hung up and separately demonstrated. The Boston Tuberculosis Association has had the pictures in the exhibit colored, which certainly adds to its attractiveness, but also to its expense. The Boston association has also had a small stand, about 1½ feet high, made, on which to place the exhibit.

From my experience with this exhibit so far and from a careful consideration of the replies sent in answer to my circular letter, I have come to the conclusion that at least two different grades of exhibits are needed, one somewhat the same as the one here described, but altered or added to in order to meet local needs, where there are photographs of actual conditions, and another form of exhibit infinitely simpler, in which by means of striking diagrams (not photographs) lessons of the simplest nature are taught. A committee of the Boston Association for the Relief and Control of Tuberculosis is now at work planning some "health charts" according to this idea. These charts, as now planned, will consist of a dozen or more sheets of paper at least 2 by 3 feet in size, backed by linen, and fastened together at the top by a wooden rod. On each sheet there will be one motto, illustrated by a picture or two contrasting pictures, in at least three colors. Such a chart with twelve pages, attractively gotten up and decorated by any large lithographing concern would cost under $5, after the initial cost of preparing plates, etc., had been met.

The advantages of such a chart for young children are obvious: 1. It is inexpensive. 2. It is easy to demonstrate and requires little or no technical knowledge on the part of the teachers. 3. It is light and easy to handle so that it can be hung over the front of the teacher's desk, or on a wall, or in any other convenient place. 4. It is simple and will not confuse young children's minds by the multiplicity of ideas presented. 5. If properly prepared, with but a single fact to be learned on each page, it will teach things worth knowing in as forcible a manner as the picture of the alcoholic stomach was impressed on my youthful imagination.

295 Beacon Street.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

[NOTE.—The pamphlets containing the outline of the postgraduate study course for county societies for the coming year are ready for distribution. Secretaries of county societies can secure supplies by writing to the Secretary, Council on Health and Public Instruction, American Medical Association, 535 Dearborn Ave., Chicago.]

Third Month—Fourth Weekly Meeting

GOUT[1]

THEORIES OF CAUSATION

URIC ACID THEORIES:[2] (1) Increased formation and decreased elimination. (2) Decreased alkalinity of blood, without increased formation. (3) Excessive formation and accumulation, exciting inflammation. (4) A hypothetic ferment. (5) Accumulation from diseased condition of kidneys.

CLINICAL VARIETIES

ACUTE GOUT: Prodromata, pains, restlessness, dyspepsia, urine. Asthmatic attacks.

Attack—Time of onset, joints usually involved, local signs, temperature, length of attack.

RETROCEDENT GOUT: Visceral or suppressed gout. Gastro-intestinal, cardiac, cerebral symptoms.

CHRONIC GOUT: Transition from acute to chronic. Joints involved. Deposits, location and chemistry. Deformity. Course. Associated conditions.

IRREGULAR GOUT: Heredity and lithemic state. (a) Joint and muscle pains. Muscles and joints usually involved. (b) Cutaneous eruptions. (c) Gastro-intestinal disorders. (d) Cardiovascular symptoms. (e) Nervous manifestations. (f) Urinary symptoms. (g) Pulmonary and ocular disorders.

1. Osler's Modern Medicine, von Noorden's Diseases of Metabolism.
2. Magnus-Levy: Amer. Jour. Med. Sc., November, 1910.

ARTHRITIS DEFORMANS

ETIOLOGY: Neuropathic origin, reasons therefor. Bacteriology. Evidences of an infectious origin. Metabolic changes. Sex. Age. Social condition and nervous shock.

PATHOLOGY: Changes occurring in synovial membranes, in cartilages, in periarticular structures, in bones. Value of *x*-ray. Differentiate pathology from gout and chronic rheumatism.

SYMPTOMS: Acute—Frequency, age and sex. Relation to pregnancy and lactation. Multiple arthritis. Course.

Chronic—Symmetrical arthritis, pain, physical signs, characteristic deformity of hands and feet. Muscles, skin, nails. Monarticular arthritis. Spondylitis deformans. Heberden's nodes, age, sex, joints, physical signs. Course of chronic form. Arthritis deformans in children.

Monthly Meeting

The Cardiac Complications of Rheumatism.
Diagnosis and Treatment of Rheumatoid Arthritis.
Uric Acid in Gout.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

CALIFORNIA: Los Angeles, December 5-8. Sec., Dr. Charles L. Tisdale, 929 Butler Building, San Francisco.

DELAWARE: State Society and Homeopathic, Dover and Wilmington, December 12. Secretary of the Medical Council, Dr. Henry W. Briggs, Wilmington.

FLORIDA: Eclectic, 1805 Florida Avenue, Tampa, December 4. Sec., Dr. Hiram J. Hampton.

KENTUCKY: The Armory, Louisville, December 19-21. Sec., Dr. J. N. McCormack, Bowling Green.

MARYLAND: Regular, 1211 Cathedral Street, Baltimore, December 12. Sec., Dr. J. McP. Scott, Hagerstown.

OHIO: Columbus, December 5-7. Sec., Dr. George H. Matson, State House.

PENNSYLVANIA: Regular, Homeopathic and Eclectic, Philadelphia and Harrisburg, December 12-15. Secretary of the Medical Council, Mr. Nathan C. Schaeffer, Harrisburg.

VIRGINIA: Lynchburg, December 19-22. Sec., Dr. R. S. Martin, Stuart.

Illinois March, May and June Reports

Dr. J. A. Egan, secretary of the Illinois State Board of Health, reports the written examinations held at Chicago, March 2-4; East St. Louis, May 3-5, and at Chicago, June 20-22, 1911. The number of subjects examined in was 16; total number of questions asked, 100; percentage required to pass, 75. At the examination held in Chicago, March 2-4, the total number of candidates examined was 74, of whom 53 passed and 20 failed. One candidate did not complete the examination. The following colleges were represented:

College	PASSED Year Grad.	Total No. Examined.
University of California	(1910)	1
Bennett Medical College	(1911)	1
Chicago College of Medicine and Surgery	(1911)	27
Coll. of Med. and Surgery, Physio-Med., Chicago.	(1910)	1
Northwestern University Medical School	(1911)	4
Reliance Medical College	(1909)	1
Rush Medical College	(1910-1) (1911-13)	14
Harvard Medical School	(1908)	1
University of Michigan, Dept. of Med. and Surg.	(1911)	1
University of Pennsylvania	(1902)	1
Woman's Medical College of Pennsylvania	(1905)	1
FAILED		
Bennett Medical College	(1909-1) (1910-2)	3
Chicago Coll. of Med. and Surg.	(1910-1) (1911-2)	3
College of Medicine and Surgery, Physio-Medical, Chicago	(1905) (1910) (1911)	3
Jenner Medical College	(1907) (1910)	2
National Medical University, Chicago	(1909)	1
Coll. of P. and S., Chicago	(1909) (1910)	2
Reliance Medical College	(1909)	1
Rush Medical College	(1911)	1
Sioux City College of Medicine	(1906)	1
Barnes Medical College, St. Louis	(1910)	1
University of Pennsylvania	(1906)	1
Tokio Medical College, Japan	(1905)	1

At the examination held in East St. Louis, May 3-5, the total number of candidates examined was 69, of whom 52 passed, 16 failed, and 1 withdrew. The following colleges were represented:

College	PASSED Year Grad.	Total No. Examined.
College of Physicians and Surgeons, Chicago	(1911)	4
Harvard Medical School	(1911)	1
Univ. of Michigan, Dept. of Med. and Surg.	(1910)	1
Barnes Medical College	(1909-1) (1910-1) (1911-9)	11
St. Louis University	(1910-1) (1911-21)	22
Washington University, St. Louis	(1910-1) (1911-10)	11
Cornell University Medical College	(1910)	1
Miami Medical College, Cincinnati	(1901)	1
FAILED		
Chicago College of Medicine and Surgery	(1911)	1
Coll. of Med. and Surg., Physio-Med., Chicago.	(1911)	1
Hahnemann Med. College and Hospital, Chicago.	(1890)	1
National Medical University, Chicago	(1911)	1
College of Physicians and Surgeons, Chicago.	(1910)	1
Keokuk Med. Coll., Coll. of P. and S.	(1908)	1
University of Louisville	(1908)	1
Barnes Medical College	(1908-1) (1911-2)	3
Homeopathic Medical College of Missouri	(1909)	1
St. Louis College of Physicians and Surgeons.	(1907)	1
St. Louis University	(1911)	3
University of Pennsylvania	(1896)	1

At the examination held in Chicago, June 20-22, the total number of candidates examined was 222, of whom 166 passed and 55 failed.[1] One candidate did not complete the examination. The following colleges were represented:

College	PASSED Year Grad.	Total No. Examined.
Bennett Medical College	(1911)	9
Chicago Coll. of Med. and Surg.	(1910-1) (1911-16)	17
Coll. of Med. and Surg., Physio-Med., Chicago.	(1911)	1
College of P. and S., Chicago	(1910-1) (1911-27)	28
Hahnemann Med. Coll. and Hospital, Chicago.	(1911)	7
Hering Medical College and Hospital, Chicago.	(1911)	4
Illinois Medical College	(1901)	1
Jenner Medical College	(1910-1) (1911-2)	3
National Medical University, Chicago	(1909)	1
Northwestern Univ. Med. School	(1909-1) (1911-67)	68
Rush Med. Coll. (1891-1)	(1909-1) (1910-1) (1911-18)	21
Keokuk Med. Coll., Coll. of P. and S.	(1906)	1
University of Louisville	(1911)	1
Harvard Medical School	(1901)	1
Omaha Medical College	(1900)	1
University of Pennsylvania	(1910)	1
Royal Hungarian University	(1893)	1
FAILED		
Bennett Medical College	(1910-1) (1911-3)	4
Chicago College of Medicine and Surgery	(1911)	9
College of Medicine and Surgery, Physio-Medical, Chicago	(1908-1) (1910-2) (1911-2)	5
Coll. of P. and S., Chicago	(1910-1) (1911-8)	9
Hahnemann Med. College and Hospital, Chicago.	(1911)	2
Hering Medical College	(1910-2) (1911-1)	3
Illinois Medical College	(1910)	1
Jenner Medical College	(1905) (1910) (1911)	3
Northwestern Univ. Med. School	(1910-1) (1911-6)	7
Reliance Medical College	(1909) (1910)	2
Sioux City College of Medicine	(1906)	1
Barnes Medical College	(1910-1) (1911-3)	4
St. Louis College of P. and S.	(1910)	1
University Medical College, Kansas City	(1911)	1
Eclectic Medical College, Cincinnati	(1911)	1
Meharry Medical College	(1908) (1910)	2

1. Subject to revision owing to applications for rerating pending.

Louisiana October Report

Dr. A. B. Brown, secretary of the Louisiana State Board of Medical Examiners, reports the written examination held at New Orleans, Oct. 19-21, 1911. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 36, of whom 20 passed and 16 failed. Two candidates were licensed through reciprocity. The following colleges were represented:

College	PASSED Year Grad.	Per Cent.
University of Alabama	(1911)	94
College of Physicians and Surgeons, Little Rock	(1911)	75
Howard University	(1909)	88.4
University of Louisville	(1911) 76.4, 77.8, 79.9	
Kentucky School of Medicine	(1908)	84.4
Tulane University of Louisiana	(1911)	83.2
Flint Medical College	(1910)	82.6
Jefferson Medical College	(1910)	89.5
Vanderbilt University	(1911)	88.2
Memphis Hospital Medical College	(1907) 75; (1910) 83.3; (1911) 76, 80.6.	
Maryland Medical College	(1910)	*5.9
Baylor University	(1910)	86
University of Texas	(1911)	88.4
Western University, London, Ontario	(1905)	86.6
FAILED		
College of Physicians and Surgeons, Little Rock	(1910)	50.3
University of Louisville	(1909) 70.7; (1910)	69
Flint Medical College	(1910)	72.1
Maryland Medical College	(1910	*5.9

St. Louis College of Physicians and Surgeons.....(1907) 71.7
Meharry Medical College.....(1910) 68.3
Memphis Hospital Medical College (1902) 71.2; (1909) 68.6; (1910) 25.6,* 71.9; (1911) 59.8, 63.4, 63.8, 64.1, 72.3.

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Northwestern University Medical School	(1909)	Illinois
Meharry Medical College	(1907)	Arkansas

* Did not complete examination.

Wisconsin October Reciprocity Report

Dr. John M. Beffel, secretary of the Wisconsin State Board of Medical Examiners, reports that at the meeting held at Appleton, Oct. 10, 1911, 16 candidates were licensed through reciprocity. The following colleges were represented:

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Northwestern Univ. Med. School	(1903) (3, 1910)	Illinois
College of Physicians and Surgeons, Chicago (1904) (2, 1909) (1910) Illinois.	(1895)	Michigan;
Chicago College of Med. and Surgery.	(1908) (2, 1910)	Illinois
Bennett Medical College, Chicago	(2, 1910)	Illinois
Omaha Medical College	(1903)	Nebraska
University of Freiburg, Germany	(1897)	Iowa

Book Notices

THE TREATMENT OF FRACTURES. With Notes on a Few Common Dislocations. By Charles Locke Scudder, M.D., Surgeon to the Massachusetts General Hospital. Seventh Edition. Cloth. Price, $6 net. Pp. 708, with 990 illustrations. Philadelphia: W. B. Saunders Co., 1911.

Previous editions of this work have been reviewed fully in THE JOURNAL so that an extensive review is not called for now. The new feature of the present edition is the presentation of those facts which during the past three years have been accepted as important in the treatment of bone injuries. A chapter on the operative treatment of fractures has been added. The author seems to belong to the rather large class of men who would advise operative treatment only in exceptional cases and even then with much hesitation and misgiving. Scudder believes that greater care with regard to the essentials of non-operative treatment will make the operative treatment unnecessary. He avoids a direct statement, except to say that in his opinion the broad indications for operation in recent closed fractures, in the absence of damage to soft parts, is inability to bring fragments into such apposition and alignment that good functional results will follow in a reasonable time. The methods of operating are described briefly. Many more roentgenograms are used in this edition and the author speaks more often and more emphatically of the value of the Roentgen ray as a diagnostic agent and to control the setting of a fracture. Evidence of careful revision is also seen in the chapters on skull fractures, fractures of the spine, nasal bones and femur. The author seems still to believe in the free and unlimited use of plaster of Paris, although the tendency to-day is to limit its use more and more.

AN INTRODUCTION TO DERMATOLOGY. By Norman Walker, M.D., F.R.C.P., Physician for Diseases of the Skin, The Royal Infirmary, Edinburgh. Fifth Edition. Cloth. Price, $4 net. Pp. 346, with 142 illustrations. New York: William Wood & Co., 1911.

Walker's "Introduction to Dermatology" appeared first in 1899. It was an outgrowth of his Edinburgh lectures to students, and was frankly offered as an orientation of the complex field of dermatology. From the time of its appearance it has been recognized as an excellent book—one that gave a careful statement of dermatology, but at the same time bore a distinct impress of the author's personality. It was and is a personal book—and a personal book that reflects credit on the author. In twelve years five editions have been called for, and that is a good evidence of the estimate in which the work is held. The succeeding editions have varied chiefly by additions to the contents. This edition takes note of recent additions to dermatologic knowledge but otherwise shows few variations from the fourth.

VETERINARY BACTERIOLOGY. A Treatise on the Bacteria, Yeasts, Molds and Protozoa Pathogenic for Domestic Animals. By Robert Earle Buchanan, Ph.D., Professor of Bacteriology in the Iowa State College of Agriculture and Mechanical Arts, Division of Veterinary Medicine. Cloth. Price, $3. Pp. 516, with 214 illustrations. Philadelphia: W. B. Saunders, 1911.

The publication of this meritorious text-book of veterinary bacteriology will facilitate the instruction of this important branch of the subject and will prove to be of enormous value both to the instructor and student. The plan of the work is excellent and the author has confined himself to the subject in hand with success so that the book is not overburdened with irrelevant reading-matter. The bacteriology of human diseases is discussed only at the border-line of human and veterinary medicine, a fact which renders the book complete without increasing the volume unreasonably. The treatment of the chapters on bacteriologic technic is brief and clear, and as the author states in the preface, not intended to take the place of a practical laboratory guide.

Section 1, which treats of the morphology, physiology and classification of bacteria, is comprehensive and clear. The only criticism is against the rather dogmatic expression of the author's opinion of the relation of bacteria to plants, and the relation of the science of bacteriology to botany. It seems that a more conservative stand would have been better. The chapters on immunity are clear, up to date and as exhaustive as this difficult subject warrants in elementary text-books. Descriptions of the various disease bacteria are concise and well illustrated.

The book is to be recommended to those engaged in the study and practice of veterinary medicine. The style is simple and clear, and the 214 illustrations taken from the best sources.

THE GOULSTONIAN LECTURES ON THE SENSIBILITY OF THE ALIMENTARY CANAL. Delivered at the Royal College of Physicians on March 14, 16 and 21, 1911. By Arthur F. Hertz, M.A., M.D., F.R.C.P., Assistant Physician and Physician in Charge of the Department for Nervous Diseases, Guy's Hospital. Cloth. Price, $1.50. Pp. 83. New York: Oxford University Press, 1911.

These lectures constitute an excellent discussion of this new field of knowledge. The author contributes numerous experiments and clinical observations of his own as a basis for the theories advanced. The failure to elicit a response to tactile stimulation from the mucous membrane of the entire alimentary tract down to the anal canal is in accord with previous observations. His conclusions, however, that the esophagus and stomach are insensitive to stimulation by dilute hydrochloric acid and organic acids, and that the contact of hydrochloric acid with a gastric ulcer does not directly produce pain but only secondarily by inciting muscular tension, are at variance with the prevailing teaching. With Ross and Head, he believes in two distinct types of pain; the one a true visceral pain, produced only by tension of the muscular layer; the other a referred pain, afferent impulses from the affected organ first proceeding to the spinal cord and thence radiating to the skin, muscles and connective tissue of the corresponding spinal segment.

The monograph treats of clinical phenomena associated with abdominal disease from the standpoint of the physiologist. The book has only eighty pages and is well worth reading.

A MANUAL OF CLINICAL DIAGNOSIS BY MEANS OF LABORATORY METHODS. For Students, Hospital Physicians and Practitioners. By Charles E. Simon, B.A., M.D., Professor of Clinical Pathology and Experimental Medicine at the College of Physicians and Surgeons, Baltimore, Md. Seventh Edition. Cloth. Price, $5 net. Pp. 778, with 168 illustrations. Philadelphia: Lea & Febiger, 1911.

This seventh edition presents a new departure in that the methods applicable in each disease with the usual findings are collected in a separate part of the work, so that the physician may compare the findings in any particular case with the clinical laboratory picture of the disease suspected. The names of diseases are arranged alphabetically. The book has been thoroughly revised. The Wassermann reaction and the Noguchi modification are fully described. In every department the work seems to have been brought fully up to date and its excellence will sustain the reputation which this manual has already achieved. The book is finely illustrated, colored plates being used to a large extent.

Medicolegal

Sufficiency of Indictment of Chiropractor—Conviction Affirmed in Second Case—Iowa Law and Requirements Explained

(*State vs. Corwin (Ia.), 131 N. W. R. 659*)

The Supreme Court of Iowa affirms a conviction of the defendant, who was accused of having professed and actually undertaken to cure and heal without having obtained, and caused to be recorded, a certificate from the state board of medical examiners. The indictment charged that he "did willfully and unlawfully assume the duties of a physician, and make a practice of treating persons afflicted with diseases and did then and there willfully and unlawfully publicly profess to cure and heal persons afflicted with disease by a system of treatment called 'chiropractic.'" That is held sufficient.

The court says that section 2579 of the Iowa Code defines who shall be deemed practicing medicine, surgery, or obstetrics, or as a physician, and these are divided into three classes: (1) any "who shall publicly profess to be a physician or surgeon or obstetrician and assume the duties"; (2) those "who shall make a practice of prescribing and furnishing medicine for the sick"; and (3) those "who publicly profess to cure or heal." Section 2580 imposes a penalty on any person who by his conduct brings himself within any of these classes. So that, construing the statutes together, they enumerate several acts disjunctively which may constitute the offense of practicing as a physician without a license, and when several acts are enumerated disjunctively as constituting an offense, and are not repugnant to each other, they may be alleged conjunctively in an indictment. The different acts which constitute the offense in one practicing without a license are not necessarily inconsistent with each other, and the indictment, even if it had charged the acts of the defendant such as to bring him within all three classes, would not have been vulnerable to the criticism of charging more than one offense. Nor was there error in ruling that the facts were pleaded with sufficient particularity. These were stated, in substance, in the language of the statute, and the rule prevails that, when this so individuates the offense that the offender has proper notice from the statutory terms of the particular offense charged, it is enough. A specific detail of the particular things done was not essential to apprise the accused of the offense charged. It was sufficient for that purpose to allege the acts declared by the statute to constitute the offense.

It was contended that the operation of the statutes should be limited to those professing or undertaking to practice medicine and surgery. But the state may determine what acts constitute practice as a physician, and may impose conditions on the exercise of that privilege. Moreover, this court has construed the statutes of Iowa to include those who without medicine or the practice of surgery publicly profess to cure and heal, and has held the medical practice statutes constitutional. In the case of State vs. Miller (124 N. W. R., 167, reported in the Medicolegal Department, on page 1474 of THE JOURNAL of April 30, 1910) the accused was a chiropractor. No useful purpose would be served by reconsideration, notwithstanding the interesting brief presented by counsel for the defendant.

The defendant published a series of articles in the newspapers, denominated "Talks with a Chiropractor," in which he directed public attention to the so-called chiropractic system of healing, to the shortcomings of the medical profession, and especially to himself as a practitioner of that system. He also undertook to heal a number of persons, and in doing so first required them to strip the back to the skin and lie on the table when he would examine the spinal column with his hands, and by sudden pressure restore the vertebræ out of place to their normal position. Manifestly he not only publicly professed to cure and heal, but undertook to do so.

If the theory is of such consequence to the world as counsel contended, it would seem that the study such as the state requires of anatomy, physiology, general chemistry, pathology, surgery, and obstetrics would not be objectionable. Surely the requirement that every one who proposes to devote himself to the prevention, cure, or alleviation of disease and pain shall possess some knowledge of the nature of disease, its origin, its anatomical and physiological features, its causative relation, and of the preparation and action of drugs, ought not to be denounced as exacting or unreasonable. Indeed, without such preparation, one might entertain a suspicion that the proposed healer was acting selfishly, and not from an intelligent conviction that his method was preferable to others. All the state insists on is qualification, and, when possessed of this and armed with a certificate so evidencing and duly recorded, the practitioner may follow any system of healing he may choose.

Liability for Injury of Persons with Latent Diseases—Waiver of Privilege as to One Physician Does Not Extend to Another

(*Jones vs. City of Caldwell (Idaho), 116 Pac. R. 119*)

The Supreme Court of Idaho holds that it was error, in this personal injury case, to refuse to instruct the jury that, if they found from the evidence that the plaintiff was caused to fall by a defect in the sidewalk negligently permitted to exist by the defendant, the defendant was responsible for all of the ill effects which naturally and necessarily followed the injury in the condition of health in which the plaintiff then was at the time of such fall, and it was no defense that such injury might have been aggravated and rendered more difficult to cure by reason of the plaintiff's state of health at that time, or that by reason of latent disease the injuries were rendered more serious to her than they would have been to a person in robust health. The court says that if the latent condition itself did not cause pain, suffering, etc., to the patient, but such condition plus the accident caused such pain, the fall, and not the condition, was the proximate cause of the injury. A person or corporation has no more right negligently to inflict injuries on a sick person than on a well person, and the existence of latent disease brought into activity by a fall or other injury will not constitute a defense to an action to recover damages for such injuries.

The court further holds that, under the statutory provision of that state that "a physician or surgeon cannot, without the consent of his patient, be examined in a civil action as to any information acquired in attending the patient which was necessary to enable him to prescribe or act for the patient," the plaintiff might waive her right to secrecy in respect to one of her physicians; but such waiver did not operate as a waiver of her right to object to the testimony of another of her physicians called by the defendant. The court says that the decided weight of authority is in favor of the view that a waiver of the privilege as to one physician does not waive the privilege as to any other physician. It is also very clear that the Idaho statute forbids and prohibits the examination of a physician without the consent of the patient, and this privilege extends to the individual witness, and not to the consultation or transaction in which he was a physician. In other words, each individual physician is a witness within the meaning of this statute, rather than a number of physicians who may be present or participate in a consultation, being treated as one witness. Nor, by calling a physician as an expert, can the provisions of the statute be evaded and the witness permitted to base his opinions on information acquired while attending the patient. If that were permitted, the provisions of the statute would be without force or effect.

Employer Liable for Use of Phenol in First-Aid Chest

(*Croghan vs. Schwarzenbach (N. J.), 79 Atl. R. 1027*)

The Supreme Court of New Jersey affirms a judgment for damages against an employer where a superintendent of his factory told one employee to wash the bleeding finger of another employee, and also told him to look for bandages in a medicine chest containing medicines for first aid for persons injured in the factory, and the employee so directed negligently used the contents of a bottle of carbolic acid in dressing the wound, by reason of which the finger was gangrened and had to be amputated. The court holds that a jury could infer that the use of a medicine found within the medicine chest was within the authority given by the defendant's agent to the employee to dress the wounded finger.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Bulletin of Johns Hopkins Hospital, Baltimore

November, XXII, No. 249, pp. 383-414

1 Medical Paintings of Velasquez. J. W. Churchman, Baltimore.
2 *Ether Glycosuria. J. H. King, B. S. Chaffee, D. B. Anderson and L. H. Redelings, Baltimore.
3 *Effect of Occlusion of Various Hepatic Vessels on Liver. M. C. Winternitz, Baltimore.
4 Teaching of Experimental Pathology and Pathologic Physiology to Large Classes. R. M. Pearce, Philadelphia.
5 Protest Against Indiscriminate Use of Organic Compounds of Silver in Ophthalmic Practice. S. Theobald, Baltimore.
6 *Jaundice in Pneumonia. F. McPhedran, Baltimore.
7 Abdominal Lipectomy. W. F. Shallenberger, Atlanta, Ga.

2. **Ether Glycosuria.**—The authors' experiments confirm the previous findings in the literature that ether causes a definite glycosuria which may make its appearance as early as twenty minutes after beginning the anesthesia and disappears by the end of twenty-four hours. The reducing property of the urine is due to dextrose. The cause of the glycosuria is a definite hyperglycemia. The liver is the organ which furnishes the increase in sugar to the blood, as shown by the absence of the occurrence of a hyperglycemia and glycosuria when the liver is removed from the circulation by an Eck fistula. Severance of all the splanchnic fibers of the celiac plexus going to the liver did not remove the hyperglycemia and glycosuria elicited by ether.

3. **Occlusion of Various Hepatic Vessels.**—Winternitz found that on account of the extensive anastomosis of the intrahepatic branches of the portal vein and the hepatic artery, occlusion of either of them is usually without effect on the liver parenchyma. The portal vein may be completely occluded and the liver only appear slightly smaller and congested. In these cases an extensive collateral circulation usually establishes itself in the hepatoduodenal ligament and the portal blood is in this way carried to the interlobular vessels. Following occlusion of the portal vein the entire liver, if it is the main branch, or only the part supplied by the occluded vein, may present a much more congested appearance. This is due to the insufficiency of arterial anastomosis which is enough to nourish the liver cells and prevent necrosis, but which allows the blood from the systemic veins to dam back into the liver capillaries. This picture is only produced when the general circulation is impaired. When the smaller interlobular branches of the portal vein are occluded the anastomosis with the hepatic artery becomes ineffectual and there is a total mechanical obstruction of the circulation in the area. This is followed by infarct formation. There is necrosis of the liver cells often accompanied by hemorrhage. The necrosis of eclapmsia belongs to this group. Occlusion of branches of the hepatic artery may result in true infarct formation. This is rare, firstly, on account of its peculiar position at the celiac axis, and secondly because of its abundant anastomoses. Occlusion of both the portal vein and the hepatic artery results in infarct formation unless the process is very gradual. Occlusion of the hepatic vein may bring about a congestion in the zone drained by it or may be absolutely without effect.

6. **Jaundice in Pneumonia.**—McPhedran estimated the corpuscular resistance in fourteen cases of lobar pneumonia with and without jaundice, in order to determine the question as to whether any of these cases might show a diminution of corpuscular resistance. In the fourteen cases there was increased fragility in only one case, this without jaundice; but in the cases with most marked jaundice there was, on the contrary, an increase in the corpuscular resistance. The urine in no cases showed any excess of urobilin. Bilirubin was present in the urine in three of the eight cases with jaundice. Autopsy showed no evidence of special changes in the liver. The blood-counts showed such a loss that one must consider it as due to a sudden great destruction. This loss is probably due to the hepatization.

Pennsylvania Medical Journal, Athens

October, XV, No. 1, pp. 1-84

8 Physician and His Societies, as Found in Pennsylvania. J. B. Donaldson, Canonsburg.
9 Etiology and Surgical Pathology of Impaired Gastric Drainage. L. J. Hammond, Philadelphia.
10 Limitations of Use and Methods of Employing Local Anesthesia in Rectal Surgery. L. H. Adler, Philadelphia.
11 Puerperal Infection. G. H. B. Terry, Wyalusing.
12 Blood Examination as Aid to Surgical Diagnosis. H. M. Armitage, Chester.

Journal of Missouri State Medical Association, St. Louis

November, VIII, No. 5, pp. 181-224

13 Prevalence of Infantile Paralysis in Missouri. A. O'Reilly, St. Louis.
14 *Etiology and Treatment of Dementia Præcox. G. W. Robinson, Kansas City.
15 *Carcinoma: With Special Reference to Carcinoma of Lip. T. E. Potter, St. Joseph.
16 *Two Cases of Tubal Pregnancy. F. G. Nifong, Columbia.
17 Symptoms Frequently Unrecognized as Being Indicative of Disturbance of Prostate and Verumontanum. J. R. Caulk, St. Louis.
18 Pathology of Rectum in Diagnosis and Treatment. W. H. Stauffer, St. Louis.
19 Functional Monoplegia. A. L. Skoog, Kansas City.

14. **Dementia Præcox.**—Dementia præcox Robinson regards as a very common psychosis, occurring in predisposed persons. Such predisposition may be recognized without difficulty. Preventive treatment will be very effective, saving many patients from developing the dementia; the treatment after the dementia develops, while not so effective, if properly carried out, will restore quite a few to a sufficient degree that they may be fairly useful citizens.

15. **Cancer.**—Potter emphasizes the necessity of removing all lymph structures in these cases. He says that the lymphatics should be most thoroughly removed no matter how far back they extend, nor what vessels are in danger of being cut in the attempt; to leave them only encourages a more rapid spread of the disease, and the complete removal is of great benefit even if there is not a permanent cure.

16. **Tubal Pregnancy.**—These cases are regarded of interest by Nifong because Case 1 exemplifies the more frequent and early results of tubal pregnancy, rupture, hemorrhage, some inflammatory reaction and the difficulty of diagnosis, being easily mistaken for pus tube, appendicitis or other pelvic trouble. Case 2 is unusual in that the pregnancy went to full term and labor was unavailing; also in the long period elapsing without trouble before surgical intervention.

Journal of Michigan State Medical Society, Battle Creek

October, X, No. 10, pp. 455-510

20 Paranoia and Certain Paranoid Conditions in Relation to Public and Medical Profession. C. B. Burr, Flint, Mich.
21 Progress of Medical Science During Last Thirty-Five Years. C. J. Ennis, Sault Ste. Marie, Mich.
22 Goiter and Its Surgical Treatment. H. M. Joy, Calumet, Mich.
23 Repair of Perineum. F. Townsend, Sault Ste. Marie, Mich.

November, X, No. 11, pp. 511-582

24 Diagnosis of Uncomplicated Ulcer of Stomach. J. T. Pilcher, Brooklyn.
25 Cysts of Gaertner's Duct. C. Georg, Ann Arbor.
26 *Relation of Premature Rupture of Amniotic Sac to Puerperal Infection. G. Kamperman, Ann Arbor.
27 Pyelonephritis of Pregnancy. W. F. Metcalf, Detroit.
28 *Blood-Pressure in Eclampsia. W. E. Welz, Detroit.

26 and 28. Abstracted in THE JOURNAL, October 28, 1911, p. 1484.

Southern Medical Journal, Nashville, Tenn.

November, IV, No. 10, pp. 725-794

29 *Practical Value of Ross "Thick Film" Method in Diagnosis of Malaria. W. M. James, Ancon, Canal Zone.
30 *Urticaria Edematosa, Following Cutaneous Tuberculin Reaction in Lupus Erythematous Disseminatus. J. L. Kirby-Smith, Jacksonville, Fla.
31 Treatment of Pulmonary Tuberculosis. F. S. Meara, New York.
32 Treatment of Pulmonary Tuberculosis by Artificial Pneumothorax. M. E. Lapham, Highlands, N. C.
33 Intestinal Worms in Examination of One Hundred and Twenty-Two Children. N. Evans, Nashville, Tenn.
34 *Delayed Resolution in Pneumonia. J. C. McLeod, Bay Minette, Ala.
35 Stiffness of Spine. T. Toepel, Atlanta, Ga.
36 Complete and Permanent Removal of Septal Spurs. A. B. Mason, Atlanta, Ga.
37 Duty of Medical Profession and Public in Prevention of Their Most Common Diseases. J. B. Elliott, Moundville, Ala.
38 End-to-End Anastomosis of Blood-Vessels. G. J. Winthrop, Mobile, Ala.

29. **Ross "Thick Film" Method in Malaria.**—This is the third and concluding paper in the series. The study made by James was a complete one and it is impossible here to quote more than a few of the points made. James says that if Ross' figures are accepted as approximately correct, and he

believes that they should be so taken, it is evident that uncomplicated malaria does not produce fever unless the parasites are present in the peripheral blood in numbers sufficient to be readily demonstrated by the thick film process, provided the search is made intelligently. And it must be true that the organisms will be found in all cases when the fever and other symptoms are severe. We should not, then, with this method at our disposal, attribute to malaria fevers of which the etiology is obscure, since we are able to find the parasites if the illness is due to uncomplicated malaria. That such is the case, James is convinced by the results obtained in the 100 consecutive cases that he studied and by those in several hundred subsequent admissions. He states it as his belief that this method of Ronald Ross will prove of a great practical value to the practitioner as his more famous discovery has been of worth to the sanitarian.

30. **Urticaria Edematosa.**—Four hours after a von Pirquet test was made by Kirby-Smith his patient began to complain of the feeling of "fleas biting;" within eight hours there was a well developed urticaria. The patient had a temperature of 101, chill, marked swelling of the face, eyes closed from the edema, large urticarial weals on the body and extremities, considerable discomfort, restlessness and inability to sleep. The following day the patient was confined to bed, body and extremities covered with large urticarial weals, face considerably edematous; had developed a cough of a dry character, some temperature present; patient suffering considerably from the subjective symptoms of the rash; itching and burning sensations severe. After having used a lotion of calamine and oxid of zinc some comfort was obtained. On the third day the urticarial symptoms, which had seemingly abated, now became active again, with new lesions appearing. After a few hours there was a general decline in the intensity of the rash, but not for a week did all the lesions disappear.

34. **Delayed Resolution in Pneumonia.**—In the two cases cited by McLeod resolution was delayed for eight and sixteen weeks, respectively.

Journal of Indiana State Medical Association, Ft. Wayne

October 15, IV, No. 10, pp. 419-468

39 Necessity for Medical Cooperation. F. C. Heath, Indianapolis.
40 *Tuberculin and Autogenous Vaccines in Treatment of Pulmonary Tuberculosis. R. T. Pettit, Ottawa, Ill.
41 Tuberculin Diagnosis. T. Potter, Indianapolis.
42 *Local Use of Tuberculin in Treatment of Open or Surface Forms of Tuberculosis. T. J. Beasley, Danville, Ind.
43 Cutaneous Blastomycosis. M. A. Austin, Anderson, Ind.
44 Some Common Errors in Treatment of Mental Diseases. C. W. Sawyer, Marion, Ohio.

40 and 42. Abstracted in THE JOURNAL, October 21, 1911, pp. 1391 and 1392.

Annals of Surgery, Philadelphia

November, LIV, No. 5, pp. 577-720

45 Acute Hematogenous Infection of Kidney. F. J. Cotton, Boston, Mass.
46 Malignant Papillary Adenoma of Kidney. J. B. Squier, New York.
47 Polyp of Urinary Bladder in Thirteen Months' Old Child. I. S. Koll, Chicago.
48 *Intraperitoneal Operation for Extensive Carcinoma of Bladder with New Method of Treating Divided Ureter. P. M. Pilcher, Brooklyn.
49 Splenectomy for Rupture of Spleen. J. C. McCoy, Paterson, N. J.
50 Prolapsed Spleen with Acute Torsion; Splenopexy. F. H. Lahey, Boston.
51 Cysts of Omentum. C. N. Dowd, New York.
52 Cirrhosis of Stomach (Linitis Plastica). H. H. M. Lyle, New York.
53 *Extensive Removal of Intestine. J. D. Whitall, Philadelphia.
54 Right Inguinal Hernia Following Appendectomy. J. P. Hoguet, New York.
55 Fracture-Dislocation of Atlas. F. L. Carson, Shawnee, Okla.
56 *Muscle Grafting for Gunshot-Wound of Shoulder. B. B. Cates, Knoxville, Tenn.
57 Impacted Fractures Through and Near Femoral Neck. V. Z. Cope, London.
58 *Catgut Sterilization. W. H. Hutchings, Detroit.
59 Treatment of Lacerated and Incised Wounds of Extremities. J. A. Kelly, Philadelphia.
60 Obesity and Its Surgical Treatment by Lipectomy. H. E. Castle, San Francisco.

48. **Carcinoma of Bladder and Ureter.**—The operation employed by Pilcher was as follows: Incision from umbilicus to symphysis; peritoneal cavity opened. Trendelenburg posture; pelvis emptied of intestines and protected by gauze pads; bladder widely opened in the median line and growth well exposed. Using scissors, the bladder wall which was involved was detached from the healthy bladder wall down to the urethral opening and the left ureter opening. At the point of exit of the left ureter it was found that the growth was superficial, having extended along the mucous membrane without involving the deeper structures. It had not apparently extended into the lumen of the ureter. The mucous membrane, the submucous structures, and a portion of the muscular tissue surrounding and underlying the left ureter opening including all of the tissues involved in the malignant growth, were freed and dissected up, the ureter itself not being cut across. By using traction on the flap which had been separated, it was found that the ureter was loosened from its sheath within the bladder wall and could easily be pulled down through the bladder wall. In this particular case over 2 inches of normal ureter were drawn through the bladder wall into the interior of the bladder. The ureter was cut across in situ, about 1 inch from its ostium, and allowed to slip back into place, the lumen cut across and the end split up about ¼ inch to avoid narrowing the outlet by cicatricial contraction. After all the cancerous tissue had been removed, including much of the surrounding tissues beneath the symphysis, a portion of the anterior vaginal vault and all but a section of the urethral orifice, the bladder was reconstructed. The vesicovaginal opening was not closed and a rubber drainage tube was led through it from the bladder to the vagina. The anterior and lateral walls were brought together first by a running Connell suture of catgut and reinforced by a running Lembert suture of catgut. The intraperitoneal portion of the bladder was closed by a separate suture and reinforced a la Mayo. The peritoneal cavity was closed without drainage. The left kidney discharged its urine via the left ureter, then through the ureterovesical fistula into the bladder. The patient made an uneventful operative recovery. There was no leakage of urine excepting through the vesicovaginal opening. The leakage per vaginam ceased about the sixteenth day.

53. **Extensive Removal of Intestine.**—Whitall reports a case of recovery after resection of 10 feet 8 inches of the ileum which had been stripped of its mesentery and was caught in a perforation in the fundus of the uterus.

56. **Muscle Grafting for Gunshot Wound.**—In this case Bates removed the ankylosed and carious head of the humerus and resected an inch or more of the shaft; then loosened the insertion of the coracobrachialis and the anterior half of the deltoid and sutured them with several strands of catgut to the freshened upper end of the biceps muscle. In order to lessen tension on the sutures the arm was kept in hyperflexion. For carrying purposes this arm is as strong as the sound arm.

58. **Catgut Sterilization.**—The method employed by Hutchings is as follows: Raw catgut without any previous treatment is placed in suitable containers which are left open. These tubes are then placed in an ordinary vacuum desiccator the bottom of which is covered with sulphuric acid and connected with a vacuum pump. The air is then exhausted until a pressure of less than 4 mm. is secured, the more perfect the vacuum the better the result. When this is attained the desiccator is closed, disconnected from the pump and set aside. Eight days are long enough to secure dryness. At the end of this time air is allowed to enter the desiccator. If perfectly dry air is needed it can first be passed through Wolff bottles containing sulphuric acid. The tubes are then rapidly sealed and are ready to sterilize. Any method of heating may be employed. Hot-air ovens have been found uncertain, as it is very difficult to regulate the temperature. In his work Hutchings has employed a mixture of glycerin and distilled water with a boiling point of 150 C., the container being fitted with a reflex condenser. The sealed tubes are placed in this and boiled two hours, thus securing two hours of dry heat at 150 C. In order to test the sterilization of gut prepared in this way, the following experiments were undertaken: Number 4 catgut was cut in 1½-inch lengths and placed in 250 c.c. Erlenmeyer flasks, containing suitable culture media.

These flasks were then inoculated with "hay" bacillus, "potato" bacillus, anthrax, tetanus and dirt from the street (aerobic and anaerobic) and incubated at 37.5 C. for twenty-one days. At the end of this time they were removed and submitted to the sterilizing process above described. One hundred and fifty samples of each kind of infected gut were used. There were no contaminations. In order to be perfectly sure that they were sterile, twenty-five samples of anthrax and tetanus gut were transplanted into guinea pigs. In no instance did they produce anthrax or tetanus in the animal. Control animals which were inoculated with the gut before sterilization died of the diseases.

Journal of Tennessee State Medical Association, Nashville

June, IV, No. 2, pp. 45-92

61 Cancer with Especial Reference to Cancer of Breast. H. M. Tigert, Nashville. •
62 Milk in Its Relation to Health of Infants. H. E. Tuley, Louisville, Ky.
63 •Fractures of Tibia and Their Treatment. P. F. Eve, Nashville.
64 Traumatic Perforation of Abdominal Viscera. W. M. McCabe, Nashville.
65 Radium. G. P. Edwards, Nashville.

August, IV, No. 4, pp. 131-173

66 Use and Application of Carbon Dioxid Snow. J. M. King, Nashville.
67 •Diagnosis and Treatment of Acute Inflammatory Glaucoma. W. Dotson, Gallatin.
68 •Vaginal Hysterectomy. J. A. Gaines, Nashville.
69 Case of Oblique Inguinal Hernia Complicated by Arterio-Venous Aneurysm. D. Eve, Nashville.
70 Lacerations of Deep Urethra. J. J. Waller, Oliver Springs, Tenn.
71 Arteriosclerosis. W. J. Matthews, Johnson City.

September, IV, No. 5, pp. 175-213

72 Clinical Pathology and Surgical Phases of Goiter. W. D. Haggard, Nashville.
73 •Appendicitis with Concurrent Typhoid. W. D. Sumpter, Nashville.
74 •Treatment of Syphilis. F. Glenn, Nashville.
75 •Salvarsan and Wassermann Reaction in Sixty Cases of Syphilis. W. Litterer, Nashville.
76 Simple Method of Giving Salvarsan Intravenously: Report of Cases. E. T. Newell, Chattanooga.
77 Chronic Influenza. O. N. Bryan, Nashville.

63. Abstracted in THE JOURNAL, May 6, 1911, p. 1354.

67 and 68. Abstracted in THE JOURNAL, May 6, 1911, pp. 1355 and 1356.

73, 74 and 75. Abstracted in THE JOURNAL, May 6, pp. 1355 and 1356.

California State Journal of Medicine, San Francisco

November, IX, No. 11, pp. 447-488

78 •Geographic Influences in Etiology of Skin Disease. E. D. Chipman, San Francisco.
79 Toxemias of Pregnancy. L. H. Briggs, Oakland.
80 •Some Points to be Considered in Feeding Infants. L. Porter, San Francisco.
81 Syphilitic Osteoperiostitis. R. Bine, San Francisco.
82 Tentative Classification of Exceptional Children. M. P. E. Groszmann, Plainfield, N. J.
83 Differential Diagnosis of Labyrinthine Affections. G. P. Wintermute, Oakland.

78. Etiology of Skin Disease.—The diseases which are apparently affected by geographic factors in Chipman's statistics are acne, eczema, dermatitis venenata, seborrheic eczema and urticaria. The special influences which seem responsible for the variation are manner of life, climate, plants and parasites, each one of which is characteristic of California, either in kind or in degree.

80. Infant Feeding.—Porter points out that a clean milk-supply is of such inestimable advantage that it is the duty of every physician to strive in every way to educate patients to an appreciation of the advantages of certified milk.

Journal of Experimental Medicine, Lancaster, Pa.

November, XIV, No. 5, pp. 445-556

84 •Pathology of Intraperitoneal Bile Injections in Rabbit. C. H. Bunting and W. H. Brown, Madison, Wis.
85 •Cultivation of Tissues in Vitro for Study of Cytotoxins. R. A. Lambert and F. M. Hanes, New York.
86 •Elimination of Phenolsulphonephthalein in Various Experimental Lesions of Kidney. A. B. Eisenbrey, Philadelphia.
87 •Lethal Cardiac Anaphylaxis in Rabbit. J. Auer, New York.
88 Salvarsan and Acute Anaphylaxis. J. Auer, New York.
89 •Hypertrophy and Regeneration of Islands of Langerhans. R. L. Cecil, New York.
90 Prosphygmic Period With Micrograph. A. C. Crehore, New York
91 Intra-Stomachal and Intra-Intestinal Inoculations of Trypanosome Virus With Tests for Immunity. B. T. Terry, New York.
92 Chemo-Biologic Study of Relations of Pepsin to So-Called Anti-Pepsin. W. W. Hamburger, Chicago.
93 Absence of Adrenalin in Malignant Renal Hypernephromas. C. Brooks, Chicago.

84. Pathology of Intraperitoneal Bile Injections.—Sufficient clinical and experimental evidence has accumulated to demonstrate clearly that bile is a toxic secretion. Certain experiments carried out by Bunting and Brown seem to indicate the truth of this contention. In considering the results of their experiments, two features are to be noted: the general toxic action of the bile and the direct pathologic effect. The minimal fatal dose of bile when injected into the peritoneal cavity seems to lie between 0.25 and 0.50 of a cubic centimeter per kilogram, the latter dose constantly producing a fatal result in less than twenty-four hours. This seems to be about twice the dose necessary to kill when introduced intravenously. Death is apparently due to direct action of the bile on the myocardium. The local pathologic effects may be briefly summarized in the statement that bile apparently produces necrosis of every type of tissue with which it comes in contact.

85. Cultivation of Tissues in Vitro.—The authors found that mouse sarcoma, which grows vigorously in the plasma of normal rats, shows little or no activity in the plasma of rats immunized by mouse sarcoma injections. Rat sarcoma, readily cultivated in the plasma of normal guinea-pigs, either remains quite inactive, or presents a feeble growth in the plasma of guinea-pigs previously treated with rat tissues. The inhibition of growth in cultures of rat and mouse sarcomata in plasma from animals of a foreign species immunized against these tissues, is due, in all probability, to the action of cytotoxins.

86. Elimination of Phenolsulphonephthalein.—The study of a variety of experimental renal lesions in the dog by Eisenbrey demonstrates that the phenolsulphonephthalein test of Rowntree and Geraghty is one of the most satisfactory and at the same time most delicate methods of estimating the functional activity of the kidney. The elimination of the test dye is decreased in so-called spontaneous nephritis and and in experimental nephritis due to potassium chromate, uranium nitrate, cantharidin, diphtheria toxin and arsenic, and in those lesions caused by snake venom, hemolytic serum, prolonged renal anemia and extensive reduction of the kidney substance. Its elimination is not diminished, but is increased, in the presence of the renal lesion caused by nephrotoxic immune serum and for this discrepancy no explanation is at hand. The test is a reliable method of demonstrating improvement in the functional activity of the kidney, as is shown in our study of spontaneous nephritis. The increased elimination of the dye occurring after small doses of various irritants, which is frequently characteristic of the early stages of a severe nephritis and which is seen also several days after unilateral nephrectomy, would appear to have an important relation to the problem of kidney function; and although probably not of clinical importance, it is worthy of further study as a phase of renal activity.

87. Lethal Cardiac Anaphylaxis in Rabbit.—According to Auer acute lethal anaphylaxis in the intact rabbit is caused by a failure of the heart, due to a change in the heart itself; it is peripheral and independent of the central nervous system for its production.

89. Hypertrophy of Islands of Langerhans.—Cecil emphasizes the fact that the occurrence of hypertrophy and regeneration of the islands of Langerhans affords considerable evidence in favor of their anatomic and functional independence.

Medical Record, New York

November 11, 80, No. 20, pp. 961-1008

94 Blood-Pressure in Prognosis. H. W. Cook, Minneapolis, Minn.
95 Trachoma. M. V. Safford, Boston.
96 Manic Depressive Insanity, Then Syphilis, Later General Paralysis. W. F. Lorenz, Mendota, Wis.
97 Henoch's Purpura. J. L. Bendell, Albany, N. Y.
98 Printed Instructions for Clinic Patients. W. H. Sheldon, New York.

Journal of Biological Chemistry, Baltimore

November, X, No. 4, pp. 295-343

99 Catalase of Sea Urchin Eggs Before and After Fertilization, With Special Reference to Relation of Catalase to Oxidation in General. S. Amberg and M. C. Winternitz, Baltimore.
100 •Utilization of Proteins of Wheat. L. B. Mendel and M. S. Fine, New Haven, Conn.
101 Maximum Production of Hippuric Acid in Animals With Consideration of Origin of Glycocoll in Animal Body. A. I. Ringer, New York.
102 •Utilization of Proteins of Barley. L. B. Mendel and M. S. Fine, New Haven, Conn.

100. Utilization of Wheat Proteins.—In their feeding experiments the authors attempted to control the extraneous factors as far as possible, by improving the texture and mechanical condition of the crude products, or purifying the individual proteins. The present paper deals with wheat. The experimental trials on man and dogs indicate that "glidin," gluten and the two characteristic proteins of wheat, gliadin and glutenin, are as thoroughly utilized as the nitrogenous components of fresh meat.

102. Utilization of Barley Proteins.—The utilization of 85 per cent. of the barley preparation with its 8 gm. of fiber and 11 gm. of hemicelluloses (of which 9 gm. reappeared in the feces) leads the authors to believe that under favorable conditions, barley protein, like that of the closely related cereal, wheat, would be almost perfectly digested.

American Journal of Surgery, New York

November, XXV, No. 11, pp. 341-372

103 Our Present Knowledge in Regard to Infantile Paralysis. R. T. Taylor, Baltimore.
104 •Experimental Demonstrations in Surgical Drainage. J. N. Rhoads, Philadelphia.
105 Surgical Complications of Gonorrhea. E. O. Smith, Cincinnati.
106 Surgical Essentials. F. E. Neef, New York.
107 Submucous Resection of Nasal Septum. H. Hays, New York.
108 Ileo-Ileocolic Intussusception Due to Adenoma of Ileum, In Child Five Years of Age; Resection of Twelve Inches of Gangrenous Intestine; Recovery. M. S. Kakels, New York.
109 Usefulness of Special Containers for Proctoclysis. C. S. Venable, San Antonio, Texas.

104. Surgical Drainage.—Capillarity *per se*, says Rhoads, cannot drain pus from an abdominal cavity. Capillarity plus gravity will drain pus from any cavity. He suggests that cavities whose openings are parallel to the external end of drainage material should have the material extended to a place where it could hang pendant, and, inevitably, it should be covered with waxed paper or some other waterproof material. Cavities whose orifices are below their level will give no trouble. They would, however, drain better with gauze than with a tube, because the gauze could be better manipulated, thereby compelling the pus to take a certain road to a receptacle. Even such a drainage should be covered with an impervious material in order to prevent the opening from becoming blocked up with inspissated pus. Solid soft rubber rods are utterly useless for drainage, unless they are covered with a vapor-proof dressing. A single soft rubber rod will not drain under any condition. Two such rods when in juxtaposition will drain if wet and placed in a pendant position, but only for a short time if not protected from the air. Rhoads has found that all fluids obey this law, whether they are heavier than pus, such as glycerin, molasses or heavy petroleum machine oil, or lighter than pus, as is alcohol, ether and water. For abdominal work the drainage material should be at least long enough to reach the bottom of the cavity up the glass tube, over the abdomen and down to the bed, or if the formation of the pus is profuse, to a bucket on the floor, as Rhoads has found that the longer the pendant arm the more rapid the flow. The abdominal tube and material should be kept saturated by immersion in a normal salt solution, and then there is no waiting for absorption, but the gauze instantly begins to drain. Hence, there is no need of the slow, arbitrary process of removing the gauze daily or oftener; and it really should be oftener; the fact is, it should be moved hourly, or as fast as it becomes saturated, because it can never get out of its own accord. When the drainage is accomplished by molecular cohesion, plus gravity, it is continuous from the instant the equilibrium is upset outside of the body, and will continue as long as the pus continues to form, and must of necessity be a hundred times shorter than when the drainage is accomplished only when the gauze is lifted out of the tube.

New York Medical Journal

November 4, XCIV, No. 19, pp. 909-960.

110 Evolution of Operating Table. W. S. Bainbridge, New York.
111 Heredity and Tuberculosis. G. B. Sweeny, Pittsburgh.
112 •Bronzed Diabetes (Hemochromatosis). G. Blumer, New Haven, Conn.
113 •Routine Postoperative Roentgenization in Cancer. C. E. Skinner, New Haven, Conn.
114 Case of Dural Endothelioma Involving Frontal Lobes. N. J. Dynan, Washington, D. C.
115 Diagnosis of Gastric Catarrh. J. A. Work, Elkhart, Ind.
116 •Acute Dilatation of Stomach Following Herniotomy Done Under Local Anesthesia. H. H. M. Lyle, New York.
117 Tubal Sterilization as Prophylactic Measure. M. A. Werner, New York.
118 Surgical Measures vs. Palliation in Epididymitis. F. C. Walsh, San Antonio, Texas.

November 11, XCIV, No. 20, pp. 961-1008

119 Thyreoparathyroid Secretion as Wright's Opsonin. C. E. D. Sajous, Philadelphia.
120 Fatalities of Delay in Diagnosis and Treatment of Rectal Diseases. J. P. Tuttle, New York.
121 Sera and Vaccines; Prophylactic and Curative. J. H. Egbert and O. O'Neill, Willimantic, Conn.
122 Use of Pure Tuberculin in Pulmonary Tuberculosis. C. Rayevsky, Liberty.
123 Combined Vaccine Therapy in Pulmonary Tuberculosis. G. Sanders, New York.
124 Monthly Mortality in Registration Area. H. A. Brown, Washington, D. C.
125 Furunculosis as Cause of Death. L. I. Harris, New York.
126 Symptomatic Parotiditis. P. W. T. Moxon, New York.

112. Bronzed Diabetes.—The case reported by Blumer presented the triad of symptoms and signs which characterize typical examples of bronzed diabetes. In thirty cases, in which the history of the diabetes is clear, the duration of life from the onset of symptoms to the death of the patient was less than a year in twenty-three. In only one did the patient live more than two years after the onset of the diabetes. So that, in a great majority of cases, the clinical picture is that of the severer form of diabetes. The symptoms are marked, the emaciation is great, the percentage of sugar is large and but little influenced by diet, and the fatal ending usually results from acid intoxication. In some of the patients, however, the sugar disappears completely from the urine in the last stages of the disease, and this disappearance undoubtedly accounts for at least some of the reported cases of hæmochromatosis with marked pancreatic lesion, but without glycosuria. The skin pigmentation, which, according to Roessle, is entirely lacking in about one-sixth of the cases, varies greatly in intensity in different cases.

In thirty-three patients of whom the age was given, twenty-nine cases occurred between 30 and 60 years; only two occurred between 20 and 30, and the same number between 60 and 70. There seems little question that alcohol plays an important part in the etiology of many, but by no means all, of the reported cases. A history of a preceding syphilis was obtainable in some cases; its significance is doubtful. In many of the patients no adequate cause for the disease is found. Pigmentation, with or without cirrhosis of various internal organs, is the chief characteristic of the disease. The pigmentation involves mostly the abdominal organs, especially the liver, the pancreas and the lymph-nodes. The thoracic organs may also show pigmentation, and there may be marked pigmentation of the thyroid and salivary glands. The chorioid plexus of the lateral ventricles, and other portions of the brain may show pigmentation.

113. Abstracted in THE JOURNAL, Oct. 7, 1911, p. 1230.

116. Acute Dilatation of Stomach.—Lyle's patient was operated on for a large right inguinal hernia. The operation was done under local anesthesia. The hernia had descended into the scrotum and contained a large amount of omentum. In order to reduce the hernia and guard against a future recurrence, it was decided to remove the redundant portion of the omentum. The mass removed weighed 4 pounds and 2 ounces. The hernia was repaired according to the Bassini method. The patient was returned to the ward in excellent condition. He was allowed some tea and toast. About one hour later, the patient began to complain of pain and distention in the epigastric region. The lower border of the stomach seemed to be about 3 inches below the umbilicus. Repeated stomach washings, combined with postural changes, gave

temporary relief, large amounts of fluid and great volumes of gas escaping. Eight hours after the initial attack, the lower border of stomach was thought to be in the right iliac fossa. Next morning the distention began to decrease, and all the acute symptoms disappeared within the following forty-eight hours. With the decrease of the distention, the patient's condition soon returned to the normal. Within a short time the hernia recurred. He was readmitted to the hospital and the hernia repaired under ether anesthesia. The smooth recovery following this operation was in marked contrast to the stormy convalescence of the previous one.

Journal of Medical Society of New Jersey, Orange

October, VIII, No. 5, pp. 229-282

127 Splenectomy for Rupture of Spleen; Four Cases. J. C. McCoy, Paterson, N. J.
128 Some Diseases of Gall-Bladder. F. M. Donohoe, New Brunswick, N. J.
129 Advantages of Autopsy and Other Pathologic Anatomic Examinations. H. S. Martland, Newark, N. J.
130 Edemas Occurring Without Albuminuria in Infancy. D. J. M. Miller, Atlantic City, N. J.

Bulletin of Manila Medical Society

September, III, No. 9, pp. 153-165

131 *Incidence of Placenta Prævia in Manila With Report of Twenty-Two Cases. H. A. Sison, Manila.

131. **Placenta Prævia.**—Of the twenty-two cases here reported, seven had previous abortions and of the nineteen cases that were examined, fifteen had retroversions and three had previous subinvolutions. Of the four primipara examined all had retroversions. Sison says the majority of the single women examined in the gynecologic dispensary of the Philippine General Hospital have retroversions. The frequent occurrence of retroversions in young Filipino girls, especially in the lower classes, is probably accounted for by the usual custom of allowing girls of 7 to 10 years of age to be the nurses for their young brothers and other relatives. These children also often have responsibilities of housework, carrying heavy baskets to the market and attending the younger members of the family.

Woman's Medical Journal, Cincinnati

October, XXI, No. 10, pp. 213-236

132 Serum Reaction in Diagnosis of Syphilis. J. W. Fisher, Middletown, Conn.
133 Eugenics or Deficiency. I. T. Smart, New York.
134 Vesico-Vaginal Fistula. A. Conklin, Chicago.
135 Chronic Dyspepsia. J. T. Pilcher, Brooklyn.

Boston Medical and Surgical Journal

November 9, CLXV, No. 19, pp. 709-746

136 Biologic Basis of Specific Therapy. S. Flexner, New York.
137 Association of Mental Symptoms With Contusions of Eye. E. R. Williams, Esmont, Va.
138 Vincent's Angina. E. H. Place, Boston.
139 *Epithelioma: Irritation as Cause. J. A. Honeij, Boston.

139. **Epithelioma.**—Out of a group of 150 patients seen by Honeij, 32 per cent. gave a positive history of irritation to some benign growth or injury to the normal epithelial surface.

American Journal of Medical Sciences, Philadelphia

November, CXLII, No. 5, pp. 625-780

140 *Tricuspid Stenosis, Report of Five Cases. T. B. Futcher, Baltimore.
141 *Operability of Intramedullary Tumors of Spinal Cord. C. A. Elsberg and E. Beer, New York.
142 Acute Phlegmonous Gastritis Due to Streptococcus Pyogenes. W. S. Baird, Montreal.
143 *Cardiac Murmurs During Attacks of Biliary Colic. D. Riesman, Philadelphia.
144 *Human Trypanosomiasis. C. N. B. Camac, New York.
145 Experience With Pulmonary Tuberculosis During Last Year. S. G. Bonney, Denver.
146 *Perforation of Intestines Due to Tuberculous Ulceration. J. M. Cruice, Philadelphia.
147 Prenatal and Infantile Tubercular Predispositions. J. B. Huber, New York.
148 *Leukocytic Picture in Pulmonary Tuberculosis. M. Solis-Cohen and A. Strickler, Philadelphia.
149 *Normal Differential Leukocyte Count. C. H. Bunting, Madison, Wis.
150 *Blood in Disease Commonly Called Nervous Disease. J. Collins and D. M. Kaplan, New York.
151 Case of Banti's Disease: Splenectomy Followed by Typhoid and Appendicitis. J. Fuhs, Brooklyn.
152 Some Phases of Spastic-Paretic Syndrome of Cerebral Diplegia. L. P. Clark, New York.
153 *Atherosclerosis, With Special Reference to Physiologic Development and Pathologic Changes in Intima. W. E. Sanders, Baltimore.

140. Abstracted in THE JOURNAL, June 17, 1911, p. 1851.

141. **Operability of Intramedullary Tumors of Spinal Cord.**—Based on the anatomic grounds the authors suggest the following method of treatment for intramedullary tumors of the cord. If after laminectomy and incision of the dura the surgeon finds that he has to deal with a localized intramedullary growth, he should make a small incision, about 1 cm. long, in the posterior median column a few millimeters outside of the posterior median fissure, at the spot where the growth seems to be nearest the surface of the cord. The incision should be deep enough to cut the pia and the substance of the column down to the tumor. The tumor will then begin to bulge through the incision. No matter how markedly the tumor will seem to bulge, the surgeon must not attempt to remove the growth, for he will be sure to cause grave injury to the cord. He must leave it to Nature to extrude the tumor. As the normal intramedullary pressure will tend to readjust itself, the growth, which has caused an increased pressure, will be gradually pushed out of its bed. Nature will do this by a slow and gradual process and the tumor will be slowly extruded, with a minimum of injury of nerve fibers. Therefore, after the small incision into the cord has been made, the muscles and skin must be closed and the actual removal of the growth left to a second operation. After about one week the wound is reopened and the tumor, which will in all probability be found outside of the cord, can be removed by dividing the few adhesions which remain. If the manipulations are done with delicacy and care, no injury should be done to the cord substance. When the tumor has been removed, the pia should be closed by fine silk sutures and the dura, muscles and skin sutured in the usual manner. In the case of intramedullary tumors which extend over a large number of segments and which infiltrate the cord substance, a small incision into the cord made in the manner above described at the level of the most marked symptoms, may allow of the partial extrusion of the tumor, with perhaps amelioration of the symptoms. It is not at all beyond the range of possibility that some cases of spinal gliosis, syringomyelia and hematomyelia will come into the domain of the surgeon. It is perfectly feasible to drain a central cavity in the cord into the subdural space and perhaps prevent the symptoms due to pressure of the fluid on the nerve fibers. In the same way it may be possible to benefit certain cases of hematomyelia by allowing the blood-clot to be extruded from the substance of the cord. The authors term this method of treatment the "extrusion of intramedullary tumors."

143. Abstracted in THE JOURNAL, June 10, 1911, p. 1753.

144. **Human Trypanosomiasis.**—Camac reports a case where the patient survives more than four years after the disease was diagnosticated.

146. **Perforation of Intestines.**—It is claimed by Cruice that perforation of the intestines in chronic pulmonary tuberculosis occurs in from 1 to 5 per cent. of cases. It is possible to diagnosticate complete perforation in only a limited number of cases. It is only possible to diagnosticate local abscess due to perforation when the mass can be felt, but it is never possible to diagnosticate with certainty a partial perforation.

148. **Lymphocytes in Tuberculosis.**—Improvement in pulmonary tuberculosis according to these authors is associated with an increase in the proportion of lymphocytes in the blood at the expense of the polymorphonuclear cells. As the patients grow worse the proportion of polynuclear cells increases at the expense of the lymphocytes. None of the other types of white cells is affected by either condition. As a consequence, the percentage of lymphocytes will usually be less and the percentage of polynuclears will be greater the more advanced the disease and the greater the amount of lung tissue involved. As a patient begins to improve there is usually an increase in the proportion of polynuclear cells containing one and two nuclei, the increase often being maintained for several weeks, but not indefinitely. Mononuclear, transitional and eosinophil cells are unaffected by the stage, extent, or progress of the disease. The leukocytic picture in pulmonary tuberculosis corresponds with the patient's resistance to the disease rather than with the extent of the lesion.

By means of the leukocytic picture it is often possible to determine the resistive power of a tuberculous patient and to form a fairly accurate estimate of the chances for recovery.

149. **Normal Differential Leukocyte Count.**—The average of the total counts made by Bunting is 7,580, while 60 per cent. of the cases lie between 6,000 and 8,000, with a minimum of 5,000 and a maximum of 12,000. Of the neutrophils, 60 per cent. of the counts lie between 50 and 60 per cent., with the remaining 40 per cent. almost equally divided between those above 60 per cent. and those below 50 per cent. The average of the counts is 54.6 per cent. Further, 60 per cent. of the small mononuclears lie between 30 and 40 per cent., with 30 per cent. of the counts below 30 per cent., and but 10 per cent. above 40 per cent. The average is 33.1. Eosinophils range from 0.8 to 9.6 per cent., with an average of 3.2 per cent., with 25 per cent. of the counts below 2 per cent., 25 per cent. between 2 and 3 per cent., 25 per cent. between 3 and 4 per cent., and the other quarter above 4 per cent. Basophils range from "none seen in counting 500 cells" to 1.8 per cent.; the average being 0.8 per cent., and 40 per cent. of counts showing more than 1 per cent. The large mononuclears vary from 0.4 to 3.6 per cent. with an average of 1.6 per cent. The transitionals are about the most constant in percentage, 66 per cent. of the counts lying between 6 and 8 per cent., with but one count below 6 per cent., and but three above 9 per cent., the average being 7.4 per cent.

150. **Blood in Nervous Disease.**—The authors point out the importance that the study of blood conditions had in leading them to correct diagnosis in five cases of so-called nervous disease.

153. **Atherosclerosis.**—Sanders' paper is based on the microscopic study of the vascular system of twenty cases selected from about 300 autopsies. The author claims that many of the cells observed in the fissures and clefts of the elastica interna, in the smaller vessels, are muscle-cells and occupy an analogous position to the longitudinal muscular layer of the aorta. The fatty spots so commonly observed on the intima bear no actual or causal relation to atherosclerosis. They invariably begin in the superficial layer of the intima and are usually a manifestation of infection. Sanders believes that this type of sclerosis is invariably the expression of senility and very rarely occurs before the fifth decade of life. Its earliest manifestations begin, invariably, in the intima and are characterized by a hyperplasia of its connective-tissue layer and also its deeper elasticomuscular layer, the latter subsequently undergoing degeneration of both its cellular and elastic elements. It is impossible to say whether the fatty degeneration of the elastic fibers begins in the fibers themselves or in their cement substance. The primary causes of atherosclerosis is an exhaustion of the elasticity of the elastic tissue in the vessel wall, and the hyperplastic changes in the intima are compensatory. There is no histologic evidence of a primary involvement of any elements in the media and a fatty degeneration of the elastic fibers of this tunic is very rarely seen. No one has been able to produce atherosclerosis experimentally.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

October 28, No. 2652, pp. 1053-1144

1 Medical Education, Past and Present. R. Saundby.
2 Clinically Obscure Malignant Tumors of Nasopharyngeal Wall. W. Trotter.
3 Deviations of Nasal Septum and Submucous Resection Operation. J. W. Wood.
4 *Case of Tonsillar Calculus. J. M. McCarthy.
5 *Treatment of Pulmonary Tuberculosis by Inducing Artificial Pneumothorax. H. Rhodes.
6 Mechanical Effects of Massive Left-Sided Pleural Effusion. N. C. Rutherford.
7 *Creatin and Creatinin in Animal Metabolism. W. H. Thompson and T. A. Wallace.
8 *Treatment of General Septic Peritonitis. R. Morison.
9 Gastroscopy: Plea for Its Routine Employment by Gastric Experts. W. Hill.
10 *Inquiry into Value of Sterilization of Skin by Iodin. C. Leedham-Green.
11 Two Cases of Sarcoma: Treatment by Radium. G. S. Ryerson.
12 Technic of Wound Treatment. A. Thomson.
13 Fibromatous Tumors of Mesentery. W. J. Greer.
14 Treatment of Fracture of Carpal Scaphoid and Indications for Operation. A. MacLennan.
15 Operation for Abdominal Aneurysm, with Preliminary Report of Two Cases. W. I. de C. Wheeler.
16 *Further Series of Eighty-One Consecutive Cases of Cleft Palate Treated by Operation. J. Berry.
17 *Tuberculous Mesenteric Glands and Abdominal Conditions They May Give Rise To. G. P. Newbolt.
18 Some Functions and Surgical Uses of Omentum. D. P. D. Wilkie.
19 Appendicitis Without Physical Signs. H. J. Paterson.

4. **Tonsillar Calculus.**—The size of the calculus in McCarthy's case was unusual. The stone measured 2.5 cm. in length, 2.5 cm. in breadth and about 1.5 cm. in depth and weighed 4.635 grams (71.59 grains). Chemically it consisted for the most part of calcium phosphate with a fair admixture of calcium carbonate and a trace of magnesium phosphate.

5. **Artificial Pneumothorax in Pulmonary Tuberculosis.**—Rhodes uses Brauer's method because his experience and observations have convinced him that this method seems to offer a greater chance of success, and, on the whole, less danger to the patient.

7. **Creatin and Creatinin in Animal Metabolism.**—The authors believe that Folin overlooked the significance of his results and that the retention of creatin, whether given with food or formed in the body, is mainly connected with carbohydrate metabolism. In three cases examined by them there was an excretion of creatin in the urine, apparently increasing with the severity of the glycosuria. There was also a marked diminution in the output of creatinin. In a mild case of diabetes the addition of creatin in 1-grain doses to the food had no pronounced effect on the output of sugar, whereas the administration of creatinin in doses of 0.15 to 0.18 gram, whether hypodermically or with the food, temporarily increased the output of sugar by nearly 50 per cent. From this a practical point arises, namely, that soups, meats and meat extracts liable to contain creatinin should not be given with the diet.

8. **Treatment of General Septic Peritonitis.**—The various forms of treatment proposed for this condition are reviewed by Morison.

10. **Value of Sterilization of Skin by Iodin.**—Leedham-Green gives the results of his tests as follows: The simple spirit proved to be decidedly inferior to the iodin and sublimate alcohol. These two clearly showed themselves to be powerful skin disinfectants. A true sterility of the skin was, of course, never obtained, but both methods always greatly reduced the infectivity of the area, even when it had been previously grossly contaminated. When both skin and silk thread were dry the result was distinctly good, the majority of the tubes remaining sterile. But when the thread was wet and still more when the skin was tested after being moistened with sterile saline or albuminous fluids, the results were disappointing. In an unpleasant proportion of cases the skin proved to be still surgically infective and this was so when it had not been previously artificially infected. Neither of the two methods can be said to guarantee sterility and the skin, which had proved to be practically sterile directly after the process of disinfection, gradually became more and more infective as, under the influence of fluid, the hardened epithelium became loosened. Up to the present (for the experiments are still going on) sublimate alcohol has given the better results. There was a slight superiority even when it was merely painted on the skin like the iodin; when it was freely rubbed on, as in the usual method of alcohol disinfection, the superiority was more marked and at times pronounced.

16. **Cleft Palate Treated by Operation.**—Berry performs the Langenbeck operation. Of the fifty-nine cases in which the hard palate was involved as well as the soft, union of the soft palate occurred fifty-eight times after the first operation. The fifty-ninth case was one of complete double cleft of the whole palate operated on at fourteen months; after the second operation union took place. Of twenty-one cases of cleft limited to the soft palate, complete union after the

first operation occurred seventeen times. In three cases a small hole was still present when last seen. The remaining case has been a complete failure.

17. **Tuberculous Mesenteric Glands.**—That tuberculous mesenteric glands may give rise to acute abdominal crises is the claim made by Newbolt. The examples he presents of volvulus and acute peritonitis due to the rupture of a suppurating gland are the most common, though no doubt acute obstruction from bands may occasionally be put down to this disease. Besides the acute, various subacute or chronic conditions may occur, giving rise to pain, simulating appendicitis, etc., which need surgical interference. Medical treatment and open air is not always sufficient to cure and several of Newbolt's patients have come from country districts where they have been under treatment. The condition is chiefly met with in young adults. Tuberculous mesenteric glands and tuberculous peritonitis merge the one into the other and it is probable that early operation by removal of the appendix and the glands in the cecal region, where possible, may occasionally cut short this disease. Whether the laparotomy or the removal of the appendix as a focus of irritation does this it is difficult to say. Whenever the glands are so much enlarged as to be palpable, and when, in addition, they give rise to pain, Newbolt says they should be removed, in order to get rid of a condition which may terminate in an acute emergency. Where there are a number of glands of small size it is useless to attempt to remove them, but if any one of them is caseating it should be excised. That is to say, when met with in the course of an abdominal operation, when complicating an appendicitis and few in number, they should be dissected out, unless this involves risk to the patient, and in this case one should wait and interfere later if necessary.

Lancet, London

October 28, CLXXXI, No. 4606, pp. 1179-1246

20 Acute and Chronic Suppuration of Nasal Accessory Sinuses. H. Tilley.
21 *Treatment of Diabetes Mellitus. E. I. Spriggs.
22 Postnasal Catarrh in Children and Its Consequences. E. Smith.
23 *Rheumatism. F. J. Poynton and A. Paine.
24 *Etiology of Scarlet Fever. R. W. C. Pierce.
25 Torsion of Funis as Cause of Death of Twins. H. A. Lediard.
26 *Action of Products of Homogeneous Fetal Autolysis on Malignant Tumors in Man. G. Fichera.
27 Results of Operation for Hammer Nose. F. B. Jefferiss.
28 Operation for Ruptured Meningo-Encephalocele. W. Edmond.
29 Case of Strangulated Left Inguinal Hernia Whose Sac Contained Appendix Vermiformis (Inflamed), Cecum and Ileo-Cecal Valve. D. G. Cheyne.

21. **Treatment of Diabetes Mellitus.**—It is pointed out by Spriggs that the success of dietetic treatment of diabetes depends very largely on the skill in cooking which is at the disposal of the patient and particularly on the varieties of appetizing dishes which can be made from foods with the help of the starchless flour and the various sugar-free jams and cakes which are provided. If the patient is on a fixed allowance of carbohydrate it is a good plan to supply him with a list of the various ways with which he can supply that amount.

23. **Rheumatism.**—A boy, aged 14 years, previously healthy and with a good family history, suffered from a first attack of acute rheumatism of five days' duration. It commenced with pain in both knees and ankles and later in the left shoulder. The temperature was 100.5 F. and the pulse-rate 100. Both knee-joints were tender and full of fluid and the other joints named above were painful. For twenty-four hours an apical systolic murmur was faintly audible, but this disappeared and the boy made a rapid and complete recovery. He was treated with salicylate of soda. A greenish fluid, which coagulated and contained some fibrinous shreds, was obtained on tapping. From this a diplococcus was isolated and grown in pure culture and was the infective agent which Poynton and Paine used in their experiments. All the injections were made from bouillon cultures into the auricular veins. The first animal injected with a large dose died from general pericarditis. The second was six weeks old and received ½ c.c. of a bouillon culture. Multiple arthritis followed and mucous diarrhea, the animal dying from an intussusception of some days' duration. A pure culture of the diplococcus taken from the joint of this animal was used for the third rabbit. This was seven weeks old and was inoculated with 1 c.c. of a bouillon culture. Monarthritis of the left knee-joint developed with general illness and diarrhea and death occurred on the third day. The post-mortem examination showed that for 1½ inches in the middle two-fourths of the appendix there was acute inflammation. The left knee-joint showed the usual early synovitis. The diplococcus was recovered in pure culture from the left knee-joint and the heart's blood. Four other rabbits were inoculated and developed multiple arthritis but no appendicitis; one developed, in addition to multiple arthritis in both elbow-, knee- and carpal joints some diarrhea and was killed when *in extremis* on the fifth day. The middle two-fourths of the appendix showed small, opaque areas, deep-seated in the substance of the wall and this part was swollen and firm to the touch. A pure culture of the diplococcus was recovered from a knee-joint. A depressed area in the appendix proved to be an acute ulcer. Another series of inoculations was made from the culture taken from the first rabbit that had suffered from acute appendicitis and one of this series was killed when *in extremis* on the third day. During life arthritis of both knee-joints had shown itself and there was some diarrhea with general illness, the result of the inoculation. The middle two-fourths of the appendix was ballooned and in the walls were small, opaque areas not so extensive as in the preceding case and situated chiefly along the mesenteric attachment. The viscera showed no noteworthy features and both knee-joints were in a condition of early arthritis. The diplococcus was recovered from one of these in pure culture. The last series that has been inoculated consisted of three young rabbits, seven weeks old, which were injected intravenously with very small doses (0.25 and 0.1 c.c.) of a bouillon culture from the knee-joint of the preceding rabbit with appendicitis. All developed arthritis and one diarrhea; this one died on the ninth day. There was marked arthritis of the left carpal joint and slight arthritis of both knee-joints, the synovial membranes of which were red and congested. About ½ ounce of turbid fluid was removed from the peritoneal cavity and the serous membrane showed early inflammatory changes. The appendix at the junction of the last one-fourth with the first three-fourths showed an opaque area deeply seated in its wall. The authors point out that the association of arthritis, mucous diarrhea and appendicitis is of interest in its bearing on the difficult question of auto-intoxication from the bowel in the human subject as a cause of arthritis. It suggests that rather than this being the primary factor, the probability is that all the lesions may be the result of some primary cause circulating in the blood-stream and determining to these various positions.

24. **Etiology of Scarlet Fever.**—Pierce reports cases which he believes tend to confirm the opinion he has long held, that a fair proportion of the patients admitted into hospitals as suffering from scarlet fever, although presenting signs which are indistinguishable from those of true scarlet fever, have not in fact necessarily contracted the infection from a previous case of the disease.

26. **Products of Homogeneous Fetal Autolysis.**—The effect of homogeneous products of fetal autolysis in cases of malignant tumors in the human subject is reported on by Fichera. The observations, begun early in September, 1909, and continued without interruption, have been all conducted on inoperable cases, of which only seven had received no surgical treatment. Twenty-nine had been operated on, even repeatedly, including recurrent cases and several with multiple and voluminous metastases. In each case the histologic diagnosis was confirmed without exception and the clinical evolution was followed up, both anatomically and microscopically, by means of the excision of small portions, repeated even eight times. The number of patients submitted to the injections was thirty-six. Of these, fourteen stopped the treatment early by their own desire for various personal reasons, having received from three to ten injections. In four of the other twenty-two cases the treatment has been only recently begun. Of the remaining eighteen patients, eight have derived no

marked benefit, except in a few cases some delay in the progress of the tumor or an initial improvement of the general condition, but only to be followed by a progressive deterioration, so that in three of these cases a fatal result occurred. As for the other ten cases, the beneficial effects are evident; and while in five cases the treatment is still proceeding, because the tumors have neither disappeared nor become modified in structure, in the other five cases the neoplastic tissues have completely disappeared, or in the residual tissue repeated excisions have demonstrated the complete transition of neoplastic into sclerotic connective tissue. Of these, three presented metastases which had degenerated sooner than the primary tumor in a manner analogous to that observed in four other cases in which the glandular metastases have now disappeared, although the original tumor, or its reproduction, still exists, more or less modified.

Journal of Laryngology, Rhinology and Otology, London

October, XXVI, No. 10, pp. 505-560

30 Radium in Diseases of Nose and Throat. T. G. Ouston.
31 Visual Fields in Anterior Nasal Sinusitis. G. F. C. Wallis.
32 Lateral Sinus Thrombosis Followed by Pyemic Abscess in Prostate; Operation; Recovery. J. G. French.

Medical Press and Circular, London

October 4, XCII, No. 3778, pp. 359-382

33 Tuberculosis of Upper Air Passages. G. C. Cathcart.
34 Chronic Catarrhal Otitis Media: Its Pathology, Symptoms, Diagnosis, Prognosis and Treatment. C. A. Adair-Dighton.
35 Medical Ethics. A. V. Elder.
36 Medical Science and Its Auxiliaries in Encyclopedia Britannica. J. Kott.
37 Twenty-Three Cases of Uterine Fibroids Removed by Abdominal Hysterectomy or Myomectomy. F. Ivens.

October 11, XCII, No. 3779, pp. 383-406

38 Tuberculosis of Upper Air Passages. G. C. Cathcart.
39 Hemoglobinuric Fever in Isthmian Canal Zone. W. E. Deeks.
40 Future of Surgery. W. M. Eccles.
41 Roentgen-Ray Examination of Urinary System. E. R. Morton.

October 18, XCII, No. 3780, pp. 409-434

42 Treatment of Ulcerative Colitis. D. Power.
43 *Unusual Case of Intestinal Obstruction. R. A. Stoney.
44 Differential Diagnosis of Alcoholic Coma from Other Forms of Coma. L. D. Mason.

43. Intestinal Obstruction.—In this case the omentum and transverse colon were found to be in the pelvis, twisted on themselves and incarcerated between an enlarged uterus and the sacral promontory; a coil of the lowest part of the ileum had passed behind this part of the large intestine and the whole of the rest of the small intestine had a complete twist round its own mesenteric axis from right to left. These two volvuli were untwisted and the contents of the small gut were milked from the duodenojejunal flexure and the ileo-cecal valve to the opening previously made and out through a Paul's tube, which was then removed and the opening in the bowel sewed up. The intestines were then returned to the abdominal cavity and the incision closed, except in the lower part, where a split rubber tube and gauze were passed down to the bottom of the pelvis. The patient was then returned to bed, the operation having taken just one hour. The patient recovered.

Annales de Médecine et Chirurgie Infantiles, Paris

October 15, XV, No. 20, pp. 625-656

45 *Congenital Spastic Paralysis. (La maladie de Little. Etiologie, pathogénie et anatomie pathologique.) V. Hutinel and L. Babonneix.

45. Little's Disease.—Hutinel and Babonneix say that the symptomatology varies so much from case to case that each writer on the subject has a separate conception of Little's disease; the patients rarely come to necropsy. Some writers insist that it is a separate morbid entity, others that it does not differ from other cerebral diplegias. After reviewing the present status of knowledge on the subject, Hutinel and Babonneix declare that all that can be affirmed positively to date is that in the majority of cases the main symptoms, the contracture, intellectual impairment and convulsions are of cerebral origin. There is no evidence as to a familial character; the cases reported as familial do not stand criticism as to the identity of the syndromes. The data at hand show that history of toxi-infections during pregnancy and premature birth or complicated delivery at term is the rule in the majority of cases.

Archives des Maladies du Cœur, Etc., Paris

October, IV, No. 10, pp. 609-672

46 The Heart Tracings Taken While Reclining on Left Side. (Le cardiogramme normal et pathologique pris systématiquement dans le décubitus latéral gauche d'après la méthode du Professeur Pachon.) C. Pezzi and H. Sabri.
47 Structure of the Valves in the Veins. (Structure des valvules veineuses.) R. Argaud.
48 Innervation of Right Auricle. (Innervation intra-cardiaque de l'oreillette droite.) R. Argaud.

Presse Médicale, Paris

October 18, XIX, No. 83, pp. 833-840

49 *Research on Hereditary Transmission of Experimental Tuberculosis. (Etude expérimentale de l'hérédité tuberculeuse.) L. Landouzy and L. Laederich.
50 *Massage of the Heart for Chloroform Accidents. (A propos du massage du cœur dans les syncopes chloroformiques.) P. Wiart.

October 21, No. 84, pp. 841-856

51 *Anaphylaxis in the Evolution of Infectious Diseases. (De l'anaphylaxie dans l'évolution des maladies infectieuses.) P. Courmont and A. Dufourt.
52 *Treatment of Hypospadias in Children. (Hypospadias pénien chez l'enfant.) M. Ombrédanne.

49. Transmission of Experimental Tuberculosis to Offspring.—Landouzy and Laederich used dogs, rabbits and guinea-pigs for their experiments which demonstrated anew that tubercle baciili can pass from the tuberculous mother to the offspring—although this evidently rarely occurs in numbers sufficient to be detected except by inoculation of animals—and that the influence of the infection in the mother is liable to induce various malformations in the young, dystrophies of various kinds, and congenital functional disturbances. They warn that while the old notion of inheritance of tuberculosis was too exclusive, yet now the pendulum has swung to the opposite extreme and the idea of exclusively acquired infection has crowded out the proper appreciation of the influence of the inherited taint, which, with syphilis and alcoholism, form the great triad of destructive forces for the individual and for the race.

50. Massage of the Heart.—Comparing the fifteen successful cases of resuscitation by this means after a chloroform accident with the eleven cases of only partial success shows that five minutes seems to be the usual limit for possible revival of the arrested heart action by massage. In only a very few instances was the patient resuscitated after a longer interval than this. The list of successes includes six cases published since 1909. It is important not to wait too long before resorting to massage, but it is still a question whether one is justified in opening the abdominal cavity to admit the hand if the operation was at some other point, but massage done through the diaphragm, in connection with artificial respiration, seems to give the patient the best chance for resuscitation.

51. Anaphylaxis in Infectious Diseases.—Courmont and Dufourt experimented with seventy-eight guinea-pigs and the serum from eight typhoid patients, the results confirming their previous statements in regard to a hypersensitization in the phase of typhoid preceding recovery. The abrupt transition from this phase of anaphylaxis, allergy or hypersensitiveness, to the phase of immunity is one of the most striking characteristics of acute infectious diseases. In a chronic infection, such as tuberculosis, the phase of anaphylaxis or allergy persists almost indefinitely, as is evidenced by the reaction to tuberculin in man and animals.

52. Hypospadias in Children.—Ombrédanne applies a modification of Segond's technic for treatment of exstrophy of the bladder. It is applicable as early as the age of 3, but it requires three sittings with intervals of three and two weeks. The various steps and the outcome are described in detail with illustrations.

Archiv für Kinderheilkunde, Stuttgart

LVI, Nos. 4-6, pp. 241-483. Last indexed October 14, p. 1326

53 Septic Disease in Children. (Zu den septischen Erkrankungsformen im kindlichen Alter.) A. Baginsky.
54 *Hygiene for Children's Walking Tours. (Die hygienischen Gesichtspunkte für die Veranstaltung mehrtägiger Jugendwanderungen.) H. Roeder.
55 Training to Increase the Supply of Milk in Wet-Nurses. (Zur Leistungsfähigkeit der Brustdrüse der Ammen.) J. Laurentius.
56 Familial Jaundice in New-Born Infants. (Beitrag zum habituellen Icterus gravis der Neugeborenen.) C. May.

57 Children's Hospitals with Infant Wards. (Ueber Bau und Einrichtung von Kinderkrankenhäusern mit Säuglingsabteilungen vom Standpunkt der öffentlichen Gesundheitspflege.) A. Franz.
58 Hemolytic Property of Milk. (Ueber Milchhämolyse.) B. Schmidt.
59 Research on Biology of Milk. (Untersuchungen zur Biologie der Milch mittels der anaphylaktischen Methode.) Heuner.
60 Infant Feeding. (Zur Physiologie und Pathologie der Säuglingsernährung.) A. O. Karnitzky.
61 Swelling of Glands in Axilla, Neck and Groin as Premonitory Sign of Acute Infectious Diseases. (Ueber ein prämonitorisches Zeichen für die Diagnose von acuter Infectionskrankheit.) G. de G. Giunta.
62 Diabetes in Two Infants. (Zusammenstellung zweier pathologisch-anatomisch untersuchter und ganz verschiedenartiger Fälle von Glycosurie, mit einigen daran geknüpften Bemerkungen über das Verhalten des Pankreas bei Neugeborenen.) K. A. Helberg.
63 Vaccination Against Scarlet Fever. (Zur Frage über die Scharlachvaccination und Anginen.) G. E. Wladimiroff.

54. **Walking Tours for School-Children.**—Parties of children from 12 to 14 years old, from the crowded parts of the cities, were taken for a six-day walking tour, the girls covering an average of 9⅓ miles a day, the boys 12⅓ miles. The principal meal was taken at the close of the day. Examination of the children before and for three months afterward showed that they had gained as much in weight and health generally as is usually gained by a sojourn of several weeks at an ordinary health resort. The children profit by the considerable physical demands made on them by this exercise and the varied features of the tour, the whole stimulating the metabolism in a way unattainable by ordinary measures. Roeder says that anything less than the six-day period and the above day's march falls short of the desired effect, and more is too much of a strain. The integrity of the internal organs must be ascertained beforehand, and provision made for good food and good quarters. Under these conditions, such walking tours, he adds, may find a definite place in the treatment of certain conditions of under-nourishment, neurasthenia, anemia and chlorosis in children, but he warns that in a hilly country the length of the march must be shortened to conform to the extra exertion of climbing hills.

Archiv für klinische Chirurgie, Berlin

XCVI, No. 1, pp. 1-252. Last indexed October 14, p. 1327

64 Hour-Glass Stomach. (Diagnostische und therapeutische Erfahrungen beim Sanduhrmagen.) F. Härtel.
65 Operations on the Chest Under Insufflation of Air and Ether. (Erfahrungen in der Thorax-Chirurgie mit der intratrachealen Insufflation von Luft und Aether—Meltzer Auer. Werth dieser Methode für die allgemeine Chirurgie.) C. A. Elsberg (New York).
66 Treatment of Consequences of Bilateral Lesions of Recurrent Nerve. (Zur Behandlung von Folgezuständen doppelseitiger Recurrensschädigung.) M. Martens.
67 Operative Treatment of Arterial Aneurysm. (Beitrag zur sogen. idealen Operation der arteriellen Aneurysmen.) E. Heller.
68 *Experimental and Clinical Study of Varices on the Legs. (Varicen der unteren Extremitäten.) A. Zancani.
69 Multiple Cartilaginous Exostoses. (Zur Frage der multiplen cartilaginären Exostosis.) B. Herzfeld.
70 *Serodiagnosis of Cancer. (Ueber neuere Methoden der serologischen Krebsdiagnose.) Stammler.
71 Plastic Operations on the Hands. (Ueber plastische Operationen an den Händen.) P. Klemm.
72 *Puncture of Corpus Callosum to Relieve Pressure on the Brain; Fifty-One Cases. (Weitere Erfahrungen über den Balkenstich bei Hirnerkrankungen.) v. Bramann.
73 Technic for Abdominal Section. (Erfahrungen mit den Sprengel'schen Bauchquerschnitten und ein neuer plastischer Querschnitt auf die Niere.) J. Bakes.
74 Incision of Kidneys and Kidney Pelvis and Its Influence on Function. (Nieren- und Nierenbeckenincisionen und deren Einfluss auf das Gewebe, sowie auf die Functionsfähigkeit der Niere.) W. N. Nowikow.
75 Caustic Depilatory for Sterilization of Field of Operation. (Sterilisirung der Haut des Patienten vor einer Operation.) A. Don (Dundee, Scotland).

68. **Varicose Veins.**—Zancani discusses the structure of the normal saphenous vein and of the resected varicose veins from nineteen patients. The insufficiency of the valves is primary to the development of the varices, and treatment should aim to interrupt the column of blood extending from the right heart to the site of the varices to relieve the weight; this can be best accomplished, he says, by ligating the internal saphena at its mouth and the intercommunicating veins between the superficial and the deep venous systems of the leg.

70. **Serodiagnosis of Cancer.**—Stammler comments on the interesting fact that all the new serodiagnostic measures are based on the presence of one and the same substance, the ferment-acting body often found in malignant disease. He examined the serum from hundreds of patients with and without cancer, making comparative tests with the various technics. None proved absolutely specific for cancer but any one may sustain a wavering diagnosis. The meiostagmin reaction was found most constant and reliable; the findings were positive in 83 per cent. of 100 cancer cases and only in 14 per cent. of 140 cases of other diseases. The findings with the various tests are tabulated for comparison, twelve pages being devoted to the tables.

72. **Puncture of the Corpus Callosum to Relieve Pressure on the Brain.**—Bramann now has a record of fifty-one cases of brain disease in which he relieved the brain from pressure by puncture of the corpus callosum. (The technic was described in THE JOURNAL, Oct. 30, 1909, page 1520.) In twenty-eight cases the trouble was a tumor, in eighteen hydrocephalus, and epilepsy in three. In about half of the thirty-three cases with choked disk, it retrogressed and almost normal vision was restored. In fifteen cases there was no change and in two of these no benefit was derived even from a supplementary trephining, the trouble being a tumor at the base of the brain. No benefit was derived in two of the three cases of long chronic epilepsy. He says that puncture of the corpus callosum is a harmless procedure, according to his experience, and decompressive trephining should not be applied until after the puncture has been tried and has failed to relieve. He cites a few typical cases to show the prompt relief obtainable especially in hydrocephalus, and the permanent improvement when the brain has not been irreparably injured.

Archiv für Verdauungs-Krankheiten, Berlin

October, XVII, No. 5, pp. 511-646

76 *The First Quarter Century of Specialism in Stomach and Intestinal Disease. (Zum 25 jährigen Bestehen des Magen-Darmspezialismus. Rückblicke und Ausblicke.) I. Boas.
77 *Diagnosis of Pancreas Disease. (Zur Diagnostik der Pankreserkrankungen.) A. Wersberg.
78 Colloidal Nitrogen in Urine in Diagnosis of Cancer. (Wert des colloidalen Stickstoffs im Urin bei der Krebsdiagnose.) M. Einhorn, M. Kahn and J. Rosenbloom (New York).
79 *Duodenal Ulcer. (Ulcus duodeni: Symptomatologie und Therapie.) M. Pewsner.
80 *Motor Insufficiency of the Stomach as Cause of Constipation. (Zur Pathogenese der Obstipation.) E. Ageron.

76. **The First Quarter Century of Specialism in Stomach and Intestinal Disease.**—When Boas founded, in 1886, his special clinic for gastro-enterology it was the first of the kind in Germany, and he reviews the ground traveled by the specialty since then. He comments on the fact that when the various specialties split off from general medicine they did not begin to blossom and bear fruit until they became more and more surgical. This has been true of gynecology, the ear, throat, bladder and kidney specialties and it is along this line, Boas thinks, that gastro-enterology promises to develop. The necessary preliminary training in internal medicine and the knowledge thereby acquired of what it is possible to accomplish with internal measures, will keep the specialist from carrying surgery too far, as he will duly appreciate the fruitful and less dangerous field of internist measures. The specialist who "weighs rather than ventures" (*das Wägen dem Wagen voranzustellen pflegt*), will have the confidence of general practitioners and of the general public which detects a tendency to one-sidedness very readily. Boas suggests permanent personal union with an abdominal surgeon as the most promising compromise for the present until the specialist himself masters expert surgical skill, the two watching over the patient constantly together at any change or aggravation, and the specialist taking an active part during operations, not merely looking on from a respectful distance but palpating and deciding with the surgeon the best mode of access, and aiding in the after-care. Too often, Boas remarks, patients succumb after laparotomies to complications which might have been avoided by specialist oversight; every abdominal operation, he declares, entails injury of vital parts and the after-care is of the utmost importance.

77. **Diagnosis of Pancreas Disease.**—Wersberg reviews all the diagnostic measures at our disposal, reporting comparative tests with them. The importance of the lipase for the diag-

nosis is still uncertain, as also that of the diastatic ferment which is secreted by the pancreas as well as by the intestinal mucosa. But the Gross-Fuld casein test may be regarded, he asserts, as specific for pancreas functioning. The technic is simple and easy and with it the general practitioner can readily test the functioning of the pancreas in every case in which there is suspicion of pancreas disease. Werzberg's tests in the clinic, with both stomach content and feces, and in dogs proved conclusively, he states, that the casein test for the presence of trypsin is a reliable index of pancreas functioning. If casein is not digested by an extract of the stools, this testifies to lack of trypsin in the stool and hence to insufficiency on the part of the pancreas.

Werzberg dissolves 0.2 c.c. sodium bicarbonate in 200 c.c. distilled water and heats to 50 or 60 C. (122 to 140 F.) and then stirs in 0.2 c.c. casein, boils the mixture for one minute and then filters. He pours 10 c.c. of this casein solution into each of five test-tubes and adds to each in turn 1 c.c., 0.8 c.c., 0.5 c.c., 0.3 c.c. or 0.1 c.c. of an extract of the stool obtained with a 1 per thousand soda solution in a proportion of 1 to 10, filtering repeatedly until the extract is limpid. After the stool extract has been added to the casein solution in the test-tubes, he adds 0.5 c.c. chloroform, and when all has been well stirred he incubates the set of glasses at 37 C. (98.6 F.). On addition of 0.3 c.c. of a 1 per cent. solution of acetic acid to each tube the fluid remains limpid if the casein has been digested by the trypsin in the stool, while with lacking trypsin the undigested casein renders the fluid turbid.

79. **Duodenal Ulcer.**—Pewsner has had sixteen cases of duodenal ulcer in the last three years with operation in three and necropsy in one case. Duodenal ulcer was also found in eleven of 1,627 cadavers at the Moscow institute, that is, in 0.64 per cent., but the duodenum was not examined in all. He gives the details of his sixteen cases, insisting on the importance of pure air, peace of mind and toning up the general condition as factors in internal treatment of duodenal ulcer, and the necessity for impressing on the patients that the tendency to ulcer production persists afterward as before, and that they must watch over their diet and have the stools occasionally examined for blood. In some cases the duodenal ulcer causes no distinct subjective symptoms; sometimes weakness and pallor are the only signs of trouble. In one of his cases the anemia from the ulcer was regarded as primary and the patient was treated for years on this assumption. In two girls of 12 and 14 the anemia was ascribed to their growing so rapidly. Examination of the stools in these three cases first revealed that the anemia was secondary. The abrupt onset of the pains, their persistence for a few hours or days and then complete subsidence, the patient possibly feeling entirely well in the interim, are the main features of these ulcero-duodenal attacks, which resemble tabetic crises. In nine cases there was considerable tenderness above the umbilicus toward the parasternal line. In eight cases there was another tender point at the back, over the right twelfth dorsal and first lumbar vertebræ. In a few cases there was a zone of tenderness corresponding to the location of the duodenum, but the tenderness rapidly disappeared when the patient kept in bed. In one case the ulcer was not suspected, the patient, an apparently healthy woman of 27, having merely four transient attacks of pain in the course of eighteen months, three times in connection with menstruation. The fourth attack was accompanied by fatal perforation peritonitis.

80. **Constipation from Motor Insufficiency of the Stomach.**—Ageron says that the Roentgen rays revealed disturbances in motor functioning of the stomach as the probable primal and chief cause of constipation in an astonishingly large proportion of cases. He presents evidence to prove that the feces are moved along by an impulse proceeding from the stomach; one argument for this is the desire to defecate which was experienced ten or fifteen minutes after breakfast—never before—in a group of persons taking a test diet for several weeks. The filling of the stomach and its evacuation are evidently the factor which starts the defecation process. Coarse foods to promote intestinal peristalsis should be avoided until the atonic stomach can be trained to take care of them. The supply of fluids should be of a kind to stimulate bowel peristalsis and they should be given at the time when the stomach can pass them along most readily, that is, before retiring and before rising in the morning. During the day little fluid should be taken with or between the meals. He advises exploratory lavage of the stomach to determine whether solids or fluids are passed out of the stomach most readily in the individual case, but in the majority of cases he finds beneficial the routine ordering of a pint of milk or thin oatmeal gruel on retiring and before rising in the morning. The reclining position in bed, especially with the pelvis raised, materially facilitates the emptying of the atonic stomach. Laxatives and laxative foods aggravate gastrogenic constipation; the insufficient stomach is unable to expel them at the proper time, while their putrefaction and fermentation generate gases which distend the intestines and in turn render the bowel insufficient. The induced electric current applied to the stomach is often a valuable adjuvant, but mineral waters distending a stomach with motor insufficiency are liable to do more harm than good. It is remarkable, he adds, how the Roentgen rays confirm his views in regard to the close connection between the emptying process in the stomach and the impulse for expulsion of the bowel content at the other end of the intestinal tube. The whole procedure is seen with roentgenoscopy to form a single process, just as he had concluded from his clinical experience and theoretical premises before the rays were applied, and as has been confirmed by his success in conquering constipation due to this cause by measures addressed mainly to the stomach. He adds that the preparations of agar-agar, advocated as ballast for bowel functioning, load down the stomach and are not passed along, while buckwheat porridge (Buchweizengrütze), thoroughly cooked, with butter, answers the same purpose and is readily evacuated by the stomach, according to his experience.

Beiträge zur Klinik der Tuberkulose, Würzburg

XXI, No. 1, pp. 1-116. Last indexed October 21, p. 1408

81 *The Three Stages of Human Tuberculosis. (Über den zyklischen Verlauf der menschlichen Tuberkulose.) K. E. Ranke.

82 *Tuberculosis and Pregnancy. (Tuberkulose und Schwangerschaft.) L. Cohn.

83 *Pneumonia with Apical Tuberculosis. (Kruppöse Pneumonie bei chronischer Spitzentuberkulose.) E. v. Czyhlarz.

84 No Pulmonary Improvement from Sanatorium Treatment of Tuberculous Stonecutters. (Heilstättenresultate bei lungentuberkulösen Steinhauern mit Bezug auf die gesetzliche Invalidenrente.) S. Gottschalk.

85 *Tuberculous Endothoracal Glands and Hilus of the Lung in Adults. (Das klinische Gesamtbild der endothorakalen Drüsen- und Lungenhilustuberkulose der Erwachsenen.) H. Philippi. (Das Blutbild und die "Blutreaktion" nach Tuberkulininjektionen bei endothorakaler Lymphdrüsentuberkulose.) E. Schulz.

86 The Air of a Pneumothorax. (Weitere Untersuchungen über Pneumothoraxluft.) F. Tobiesen.

81. **Cyclic Course of Tuberculosis.**—Ranke calls attention to the three phases of tuberculosis, corresponding to the three stages of syphilis. In the first stage the infection is rapidly generalized, the glands involved. In the second phase, infectious processes of blood-borne origin develop in bones, joints or glands, but the organism has reacted with production of antibodies which localize and tend to arrest the processes. In the third and late phase, with phthisis or lupus, there is a high degree of immunity to new infection. Tuberculosis in infants and glandular tuberculosis in children correspond to the first phase, similar to the diffuse general tuberculosis induced in animals by a first infection. In both cases the severity of the infection depends on the size of the dose of tubercle bacilli causing the infection. Both syphilis and tuberculosis thus accompany the bearer from the moment of infection to his death, often years and years after, and possibly with some other cause responsible for death finally. That the analogy between tuberculosis and syphilis has not been generally recognized before is due to the more chronic course of the former and the less striking differences between the three phases, and also to the fact that the first infection generally occurs in infancy and its manifestations have often been ascribed to other causes, and its peculiar character as a generalized glandular affection has been accepted as a characteristic of the age. But a first infection at any age starts in with this same diffuse general and glandular form. If the tuberculosis runs a very acute course the three phases may blend deceptively into each other.

82. **Tuberculosis and Pregnancy.**—Cohn states that in his fifty-eight cases during the last four years the pregnancy

in fifty-three cases did not seem to influence the tuberculosis in a noticeable manner. The tuberculosis was of various types, quite severe in some, but the disease did not appear to be modified in any way, being apparently just the same afterward as before, even in two women who passed through three pregnancies in a little more than three years. In the five other cases the tuberculosis became aggravated a year after the childbirth in two; in two others there was aggravation of the disease after the pregnancy and still greater aggravation after a second pregnancy not long after. In the fifth case there was merely a mild transient aggravation. He was impressed, however, with the constantly unfavorable influence of lactation, and he advises against breast nursing in the interests of both mother and child, permitting it only under strict supervision, weighing the woman regularly.

83. **Pneumonia with Chronic Apical Tuberculosis.**—Czyhlarz reports forty-four cases of croupous pneumonia in patients with a chronic apical tuberculous process. The latter seems to induce a predisposition for the pneumonia and it seems to run a milder course than under other conditions.

85. **Clinical Picture of Mediastinal Glandular Tuberculosis in Adults.**—Philippi and Schulz discuss the syndrome of tuberculosis of the endothoracal glands and hilus of the lungs in adults, the rôle of the lymph glands in blood-production, and the blood reaction to injection of tuberculin with mediastinal glandular tuberculosis, tabulating the details in thirty-two cases. The main symptom of tuberculosis of the endothoracal glands or hilus of the lung seems to be a pronounced paravertebral dulness between the spine and the middle of the scapula, generally separated from the dulness over the apex by a free zone and a parasternal dulness most pronounced in the second interspace. Resonance is impaired over the corresponding dorsal vertebræ and there is increased resistance over the hilus dulness. Breathing is more or less of the bronchial type, generally impure, often with a whooping sound in hard coughing. Bronchophony is exaggerated and roentgenoscopy may give positive findings. With active processes in the endothoracal glands there is always a pronounced lymphocytosis, which can be increased by injections of tuberculin. The temperature is subfebrile and variable and the cutaneous tuberculin reaction is generally positive with a weak solution of tuberculin. There is often a tendency to recurring marginal pleuritis. In addition to these principal symptoms there may be pains in the back or chest, tenderness over the affected parts or corresponding vertebræ, paroxysmal dyspepsia, irregular heart action, functional disturbances in the vocal cords, paroxysms of coughing, occasional "stitch in the side," pallor, variable bronchitic symptoms, accentuation of the vocal fremitus, impure sounds over the large vessels, and accentuation of the second pulmonary sound corresponding to the dulness. The details of six typical cases are given to illustrate the harmony between the physical and radiographic findings.

Berliner klinische Wochenschrift

October 23, XLVIII, No. 43, pp. 1917-1960

87 *Pseudoleukemia. (Über die Hodgkinsche Krankheit, das maligne Lymphogranuiom.) K. Ziegler.
88 *Mechanical Factors in Digestion. (Ueber die Nahrungsverwertung bei atonischer Enteroptose und über den Einfluss mechanischer Momente auf die fermentative Spaltung der Nahrungsstoffe.) R. Ehrmann.
89 *Diet in Nephritis. (Materiallen zur Diätetik bei Nephritis.) A. Kakowski.
90 Action of Hydrogen Dioxid on Enzymes. (Einwirkung von Wasserstoffsuperoxyd auf das enzymproduzierende Vermögen der Schleimhaut und auf die ausgeschiedenen Enzyme.) L. E. Walbum.
91 *Endonasal Removal of Hypophysis Tumors. (Ueber endonasale Operationsmethoden bei Hypophysis-Tumoren mit Bericht über 12 operierte Fälle.) O. Hirsch.
92 Technic for Biologic Tests. (Ueber weitere Versuche, Antigen-Antikörperwirkungen sichtbar zu machen.) W. Weichardt.
93 Experimental Research on Regeneration of Peripheral Nerves. (Experimenteller Beitrag zum Studium der Regeneration der peripheren Nerven.) M. Dominici.

87. **Hodgkin's Disease.**—Ziegler regards pseudoleukemia or malignant granuloma as, with the exception of tuberculosis, the most frequent and important disease of the lymphatic system. There are generally no subjective symptoms during the first, the local stage, but weakness, anemia and cachexia accompany the second phase, the generalization, and there may be an itching exanthem, with irregular fever and sometimes sweats, pains in the sacrum, abdomen and limbs and somnolency. The disease generally proves fatal in one or two years, but it may run a more acute course or drag along for five, seven or more years. The peripheral lymph nodes may be exclusively involved or only the deep ones, especially the retroperitoneal, or both systems may be affected. In some cases the spleen may be almost exclusively affected. To date it has proved impossible to transmit the disease to animals. He says that the variety of bacteria found in the lesions demonstrates their secondary character. Tuberculosis is the most frequent complication. Arsenic is the only drug that has ever displayed any efficacy, and this only in isolated cases. It should be given in comparatively large doses, kept up for months; operative treatment can be only palliative. Before the glandular enlargements have reached the connective-tissue stage, roentgenotherapy has proved successful beyond all expectations in some cases.

88. **Mechanical Factors in Digestion.**—Ehrmann's chemical and clinical research has demonstrated that the muscular contractions, the kneading and pressing in the digestive tract have a powerful influence in promoting the action of the digestive juices. Persons with strong musculature can thus get along well even with defective secretory conditions, as also persons with atony of the muscles can digest fairly well if the digestive juices are particularly powerful. His work emphasizes the benefit liable to be derived from massage in cases of atony, thus supplying from without, in the massage, the missing mechanical factors.

89. **Tomatoes in Nephritis.**—Kakowski reports careful study of the metabolism in five patients with nephritis, who ate tomatoes freely, both raw and cooked. He was unable to detect any evidence of injury from the tomatoes, spinach, or other greens in any form of acute or chronic nephritis. He concludes that the traditional dread of these vegetables with kidney disease has no basis and that there is no reason to forbid the occasional ingestion of small amounts.

91. **Endonasal Removal of Hypophysis Tumors.**—Hirsch has performed this operation in twelve cases. In nearly every one of the ten successful cases, the acromegaly, headache and disturbances in vision were notably improved. The endonasal method is applicable for all cases in which the sella turcica protrudes toward the sphenoidal sinus. Two of the patients did not survive the operation but the technic was not responsible for the fatal outcome.

He opens into the sphenoidal sinus at several sittings, first removing the middle turbinate bone, then clearing out the ethmoid bone and finally resecting the anterior wall of the sphenoid bone, which exposes the sella turcica. This is chiseled off and its floor removed as far as possible. This in turn exposes the dura and when this has been cut around the hypophysis tumor becomes visible and may thus be curetted away. As this technic permits only a small opening, and this not in the median line, he prefers now submucous resection of the septum, according to Killian's technic, but carrying the resection farther back, to the rostrum of the sphenoid bone, extending it to the anterior walls of the sphenoid bone. This exposes the hypophysis tumor better than the other technic, and it is more readily shelled out after slitting the dura. An iodoform tampon is introduced between the layers of the mucosa to insure drainage.

Deutsche medizinische Wochenschrift, Berlin

October 19, XXXVII, No. 42, pp. 1921-1968

94 *Constipation as Factor in Asthma. (Beziehungen der Koprostase zum Bronchialasthma.) W. Ebstein.
95 Cerebral Defects in Speech. (Ueber Aphasie und Anarthrie.) H. Gutzmann.
96 Remote Effects of Hypophysis Tumors. (Ueber Dystrophia adiposo-genitalis bei Neubildungen im Hypophysengebiet, insbes. vom praktisch-chirurgischen Standpunkt.) L. Pick.
97 *Inoculation with Spirochetes and Wassermann Reaction in Rabbits. (Ueber Spirochaete pallida-Kulturimpfungen nebst Bemerkungen über die Wa. R. beim Kaninchen.) H. Sowade.
98 Serotherapy in Typhoid. (Behandlung von 20 Typhusfällen mit dem Typhusserum von Kraus.) H. Forssman.
99 *Modern Diagnostic Measures for Tuberculosis. (Der gegenwärtige Stand der Tuberkulosediagnostik.) O. Roepke.
100 Gangrene of Gall-Bladder from Perforation of a Gastric Ulcer. (Gallenblasengangrän durch Magengeschwürperforation.) H. Riese.
101 *Treatment of Rachitic Curvature of the Legs. F. Hohmeier.
102 Fracture of Lesser Trochanter. (Die Fraktur des Trochanter minor.) F. Bähr.
103 *Intramuscular Injections of Blood in Successful Treatment of Pernicious Anemia in a Parturient. (Fall von perniciöser Anämie im Wochenbette und seine Behandlung durch intramuskuläre Injektionen von defibriniertem Menschenblut.) P. Esch.

94. **Constipation in Relation to Asthma.**—Ebstein does not suggest that asthma is always due to constipation, but states that he has in a number of cases found that the asthma subsided as chronic constipation was cured. In one such patient there was an interval of nine years before the asthma returned, accompanied by dyspepsia and constipation; as gastro-intestinal functioning was restored to normal the asthma disappeared anew. In every case of asthma it is a good plan to be sure that the digestive tract is functioning properly as the first step in treatment. In one of the cases described a boy of 8 was cured of unusually severe asthma by relief of constipation.

97. See editorial in THE JOURNAL, November 18.

99. **Serodiagnosis of Tuberculosis.**—Roepke concludes from his review of the present status of differential diagnosis of tuberculosis that the chronic, fluctuating course of tuberculosis does not promise instructive findings from serodiagnosis; the changes in the blood are not specific or permanent enough for this in adults. In children the cutaneous, Pirquet test is reliable and instructive, harmless and simple, but is of little use for adults.

101. **Treatment of Rachitic Curvature of the Long Bones.**—Hohmeier has applied with excellent results the Roepke and Anzoletti technic for correction of rachitic deformity. They immobilize the limb and the bone softens in the plaster cast; in four or six weeks the cast is removed and the softened bone is then readily straightened. Hohmeier has applied the method with eminently satisfactory results in seven children of about 4. For older children, osteotomy and osteoclasis are preferable, as also when roentgenoscopy shows sclerosis of the bone.

103. **Transfusion of Blood in Treatment of Pernicious Anemia.**—Esch reports a case of pernicious anemia developing in the second half of a pregnancy, with a rapid turn for the worse after delivery which had been unusually favorable. By the seventeenth day there was fever, with only 488,000 red corpuscles, 2,700 whites and hemoglobin 22 per cent., but the internal organs seemed sound. He injected 35 c.c. of defibrinated blood taken from a woman with 70 per cent. hemoglobin. After three more injections in two weeks the anemia rapidly subsided and the hemoglobin increased to 53 per cent. The dyspnea, nausea and vomiting were arrested by the first injection, and by the end of two months the blood showed normal conditions, with 75 per cent. hemoglobin. Five injections were made in all in less than a month, the amounts ranging from 25 to 70 c.c.

Medizinische Klinik, Berlin

October 22, VII, No. 43, pp. 1645-1682

104 Psychotherapy. (Psychotherapeutische Richtungen.) J. Donath.
105 *Tabetic Virgins. (Tabische Jungfrauen.) K. Mendel and E. Tobias.
106 *Treatment of Chronic Arthritis. (Technisches zur Behandlung der chronischen Arthritiden.) E. Plate.
107 *Oxyuris Vermicularis. F. Kanngiesser.
108 Depressing Influence of Experimental Jaundice on Production of Pepsin. (Einfluss des Ikterus auf die Pepsinbildung.) A. Grube.

105. **Tabetic Virgins.**—Mendel and Tobias found fourteen unmarried women in their total 151 female tabetics in the last ten years. Eleven of the fourteen had a history suspicious of syphilis, but three others were virgins. It was ascertained, however, that one or both of the parents of these three virgins had had syphilis and tabes, so that the tabes was due to an inherited taint in each one.

106. **Treatment of Arthritis.**—Plate describes several mechanical contrivances which have proved very useful in treatment of painful and stiff joints. One is a derrick which lifts the patient, chair and all, into the bath tub sunk in the floor. The water reaches to the chin and he is left in the hot bath for nearly an hour. Movements of the otherwise rigid joints are possible in the hot water and great benefit is derived from this exercise. Plate has also modified the devices for applying superheated air to the hand, knee and other joints. In measuring the muscles to detect or exclude atrophy, he marks the points so the measurements can be made at the same spot each time.

107. **Helminthiasis.**—Kanngiesser reports a case of annoying oxyuriasis which he has been able to cure although all the usual measures have been perseveringly applied. The persistence of the parasites can be explained, he thinks, only by assuming some inaccessible nest in the appendix.

Jahrbuch für Kinderheilkunde, Berlin

October, LXXIV, No. 4, pp. 367-488

109 *Importance in Infant Feeding of Proper Balance of Fat and Lime in the Intestines. (Bedingungen für das Zustandekommen fester Stühle beim Säugling.) K. Stolte.
110 The Pulse Curve in Typhoid in Children. (Ergebnisse kardiosphygmographischer Untersuchungen beim Typhus abdominalis im Kindesalter.) W. Schlieps.
111 *The Heart in Scarlet Fever. (Scharlachherz.) R. Lederer and K. Stolte.
112 Relations Between Size of Chest and Skull and the Weight in Infants. (Beziehungen zwischen Brustwachstum, Schädelwachstum und Körpergewichtszunahme bei Säuglingen.) E. Zeltner.

109. **Proper Balance of Fat and Lime the Main Essential in Infant Feeding.**—Stolte comments on the conflicting statements of various pediatrists in regard to infant feeding, some obtaining excellent results with one food mixture while others found this mixture harmful, some denouncing the very elements in the food to which others ascribe its efficiency. Looking over the entire field from a higher standpoint shows, he says, that one feature is common to all the cases in which the infants thrived, namely, that the stools became less fluid, and his research indicates that this change in the consistency of the feces is the result of soap production and absence of fermentation. The aim in feeding therefore should be to ensure soap production and avoid fermentations. From this standpoint the benefit from the most varied systems of infant feeding is easily understood; each by different routes arrives at the same goal. The essential point is the proper balance of fat and lime in the bowel to ensure soap production. If too much or too little of either is present, the desired aim is not attained. Fermentations induce production of fatty acids which irritate the intestines and interfere with saponification. These views explain the advantages of "albumin milk" as the intestinal flora with this induce putrefaction rather than fermentations. They explain further the tolerance to carbohydrates with buttermilk, which contains especially large proportions of lactic acid and albumin. They also explain how diarrhea may be arrested by albumin milk, by buttermilk, by diluted milk, or by milk and lime water. With cow's milk more lime is needed to saponify the fatty acids generated in the intestine by splitting of the fat. Stolte found it possible to check diarrhea almost unfailingly when he gave the infants lime water with the diluted milk, without carbohydrates. The more complex the structure of the carbohydrate given, the longer it takes to be broken down into its ultimate elements, and thus the less material to ferment in a given period of time, and hence the less opportunity for the fermentation producers to do their evil work. These more complex polysaccharids include dextrin, flours and malt. This difference between the various carbohydrates was instructively shown in one of his cases in which the infant had diarrhea on albumin milk and cane sugar, while the stools became formed when flour was substituted for the sugar, and the stools became actually hard when nothing but a cereal gruel was given with the albumin milk. It is possible that the property of promoting putrefaction rather than fermentation is the chief advantage of the albumin milk; infants thrive on breast milk after serious illness although breast milk is poor in albumin, showing that the protein content alone is not the essential factor.

111. **The Heart in Scarlet Fever.**—Lederer and Stolte report the details of nine cases and of experimental research undertaken to determine the factors in the modification of the heart action during and after scarlet fever. The conclusions from this material are encouraging, as the data all confirm the assumption that the disturbances are due to lack of fluids in the organism; they increased and subsided parallel to the losing and gaining in weight of the little patients; that is, with the total amount of fluids in the body. Anatomic and chemical factors are altogether subordinate to the physical.

and by removing the cause, that is, by increasing the pressure in the vascular system, it was possible to banish at will the scarlatinal phenomena on the part of the heart.

Münchener medizinische Wochenschrift

October 17, LVIII, No. 42, pp. 2201-2256

113 *Vasoneuritic Syndromes in Children. (Ueber den vasoneurotischen Symptomenkomplex bei Kindern.) F. Hamburger.
114 Size of Heart at Close of Pregnancy. (Zur Frage der Herzgrösse am Ende der Schwangerschaft.) R. Müller and R. Jaschke.
115 *Serodiagnosis of Cancer. (Zur Serodiagnostik der malignen Tumoren.) P. v. Monakow.
116 Influenza Bacilli in the Blood. (Influenza-Bakteriämie.) E. Reisz and H. A. Gins.
117 Adrenal Functioning Not Excessive in Diabetes. (Ist beim Diabetes mellitus eine Ueberfunktion der Nebennieren nachweisbar?) A. Bittorf.
118 Operative Treatment of Gastric Cancer. (Zur Radikaloperation des Magenkarzinoms.) F. Sasse.
119 Salvarsan in Relapsing Fever. (Zur Frage über Mittel der Bekämpfung des Typhus recurrens—Anwendung des Salvarsan.) T. N. Remesow.
120 *Deafness After Salvarsan. (Ueber bilaterale Ertaubung und Vestibularausschaltung nach Salvarsan.) O. Beck.
121 Prescribing of Male Fern. (Die Verordnung von Extractum Filicis Maris.) M. Henius.

113. **Vasoneurotic Symptoms in Children.**—Hamburger thinks that not enough attention has been paid to the nervous and vasomotor symptoms of children while neurasthenia in adults has been so exhaustively studied. He describes in detail such symptoms on the part of the heart and vascular system and the causal factors. The children affected are generally bright and ambitious children who take things to heart and feel that they are misunderstood or unjustly treated by teachers and parents. A fright or great disappointment or other emotion or the accumulation of minor depressing moral influences is liable to bring on the vasoneurotic syndrome. Eye, ear and organic heart disease as well as nephritis must be excluded before diagnosing the vasomotor origin of the headache. With vertigo and syncope, anemia, epilepsy and cardiac defects must be excluded. The prognosis is good if the cause can be removed and here, besides general hygiene, the main point is for the physician to win the trust of the child.

115. **Serodiagnosis of Cancer.**—Monakow has been making comparative tests with the various technics for serodiagnosis of cancer but was unable to obtain reliable results with any except the meiostagmin test. The serum from one-fifth of all the cancer cases showed a destructive action on cancer cells while this destructive action was lacking in the serum from one-fourth of all the controls.

120. **Deafness After Salvarsan.**—Beck reviews the various cases that have been published of disturbances in the auditory and vestibular nerves after the use of salvarsan in syphilis, discussing them from the standpoint of the ear specialist. He knows of only three cases of bilateral deafness and blocking of the vestibular apparatus in syphilis untreated with salvarsan, and these three cases have already been commented on in the literature (Frey and Kownatzky). In his own experience he has had two cases after salvarsan, one of which has been already published by Mucha. The other is reported in detail. This patient was a man of 28, healthy except for recent mild syphilis. He was given an intravenous injection April 17, and six weeks later he became totally deaf in the left ear after two days of subjective noises, and two days later the right ear also became totally deaf, with blocking of the vestibular apparatus, although no symptoms of labyrinth trouble were apparent. Mercurial treatment was begun eight days after the onset of the deafness, four days after it had become total, and the elimination of toxins was promoted by injections of pilocarpin, but there had been no improvement in hearing to date. Beck suggests that it might be wise when giving salvarsan to follow it with pilocarpin to promote elimination of the arsenic after it has accomplished its purpose. Iodin and sweat baths might also prove useful. The patient said he had never had any ear trouble. The previous condition of the ears was not known in either of Beck's two cases.

Therapeutische Monatshefte, Berlin

October, XXV, No. 10, pp. 581-644

122 *Induced Pneumothorax in Treatment of Pulmonary Tuberculosis. (Behandlung der Lungentuberkulose mit künstlichem Pneumothorax.) A. Cahn.
123 *Camphorated Oil in Pulmonary Tuberculosis. (Kampferbehandlung der Phthisiker.) Volland.
124 Device to Keep Nostrils Open for Mouth Breathers. (Noch etwas gegen die behinderte Nasenatmung.) Volland.
125 Salvarsan in Malaria. (Heilung der Malaria quartana durch Salvarsan.) J. Reich.
126 Elimination of Arsenic After Injection of Salvarsan. (Ausscheidung des Arsens nach der intramuskulären Injektion des Dioxydiamidoarsenobenzols.) K. Muto and Y. Sanno.
127 *Chronic Poisoning from Hair Dye. (Chronische Vergiftung durch ein Paraphenylendiamin-Haarfärbemittel.) J. D. Damianos.
128 Salt Content of Sea Air. (Salzgehalt der Seeluft.) W. Heubner.
129 *Test for Carbon Monoxid in the Blood. (Nachweis des Kohlenoxyds im Blute mittels Schwefelammonium und Wasserstoffsuperoxyd.) T. Lochte.

122. **Experiences with Induced Pneumothorax.**—Cahn has modified the technic for inducing therapeutic pneumothorax and reviews his experiences with this means for inducing compression of the lung. The results are excellent and permanent in about a third of all the cases and are fairly good in a few more cases. In about a fifth of all the cases, however, some complicating pleurisy or empyema of the lung conflicts with the desired outcome. Resection of ribs should be restricted to the rare cases of extreme shriveling of one lung with total adhesion of the pleura.

123. **Camphor in Tuberculosis.**—Volland advocated five years ago the occasional subcutaneous injection of 10 per cent. camphorated oil (Kampferöl) and his experience since has proved anew, he says, the benefit to be derived therefrom in pulmonary tuberculosis. He has injected as much as 24 or 30 gm. in twenty-four hours in cases of severe hemoptysis.

127. **Poisoning from Hair Dye.**—The symptoms in the case reported were like those of chronic anilin poisoning. The hair dye contained paraphenylendiamin, the use of which is prohibited in Germany, Austria and France. There is no restriction on its sale in Greece and the patient had been using it there about once a week since 1898. The chronic nervous exhaustion, dread, weakness, vertigo, photophobia and recurring clonic spasms finally became so severe that the woman was confined to a dark room. Damianos had her head washed repeatedly to get rid of the dye and gave her hexamethylenamin for three weeks and large doses of bromids for three months, by which time the patient was able to sit up and bear the light. Improvement continued, with no further attacks, but there is still a marked tendency to depression. The special features of the case were the photophobia, spasm of the lids and epileptiform seizures resembling Jacksonian epilepsy.

129. **Test for Carbon Monoxid in Blood.**—Lochte states that the fluid turns olive green when to 1 drop of normal blood in 10 c.c. of water are added 10 drops of ammonium sulphate. The fluid retains its cherry red tint if the blood in question is saturated with carbon monoxid; the fluids are limpid and the spectrum can be readily determined, the spectrum for carbon monoxid appearing at the same time as that for methemoglobin sulphate. Under a layer of paraffin the solutions keep for a long time unmodified.

Therapie der Gegenwart, Berlin

October, LII, No. 10, pp. 433-480

130 Flexible Gastroscope. (Ein biegsames Gastroskop.) M. Sussmann.
131 *Salvarsan in Syphilitic Cardiovascular Disease. (Salvarsanbehandlung syphilitischer Herz- und Gefässerkrankungen.) W. Weintraud.
132 Grape Sugar in Severe Diabetes. (Verwertung reinen Traubenzuckers bei schweren Diabetikern.) G. Klemperer.
133 Cosmetic Radiotherapy. (Das Licht in der Kosmetik.) E. Kromayer.

131. **Salvarsan in Syphilis of Heart or Vessels.**—Weintraud gives in tabulated form the details of thirty-eight cases of syphilitic cardiovascular disease in which he gave salvarsan. Ehrlich has warned against administering salvarsan when the heart or vessels are below par for any reason, but Weintraud has never had any mishaps from this. The youngest patient in whom the syphilitic aortitis was diagnosed was 30 years old, and the intervals since infection ranged from three to forty years. All have been in comparative good health since the injections of salvarsan, except one who has died recently from cerebral hemorrhage.

Wiener klinische Wochenschrift, Vienna

October 19, XXIV, No. 42, pp. 1455-1486

134 Multiple Pseudofibromatosis in Dermatitis of the Hands and Feet with Atrophy. (Die multiple Pseudofibromatose im Zustandsbild der Akrodermatitis atrophicans.) G. Nobl.
135 *Syphilis of the Kidney. (Die klinisch-serologische Diagnose der luetischen Nierenerkrankungen.) R. Bauer.
136 Superficial Vascular Neuroses. (Ueber Neurosen der Hautgefässe.) L. Hess and H. Königstein.
137 Destructive Action of Radium Emanations on the Eggs of Crabs and Salamanders. (Wirkung der Radiumemanation auf Eier niederer Tiere.) R. Bauer.

135. **Syphilitic Kidney Disease.**—Bauer reports three cases of this comparatively rare affection. The discovery of isolated amyloid disease of the kidneys, for which no other explanation can be found, suggests a syphilitic origin. The Wassermann reaction in the serum was pronounced in his three cases, as also in the urine. These positive reactions do not indicate, however, whether the kidney trouble is due to the direct local action of spirochetes or to the action of toxins alone. In his first two cases mercurial treatment cured the patients except for persisting slight albuminuria during the year or two since. The third patient was practically moribund when first seen. He had had scarlet fever and diphtheria in youth and acquired syphilis at 24, causing slight symptoms. Six years afterward there was recurring diarrhea and after twelve months' edema, ascites and anasarca developed and to such an extent that the patient, a man of 31, was completely bedridden and died two months after entering the hospital; necropsy revealed extensive changes in heart, lungs and liver. The striking features in all the cases were the albuminuria up to 20 and 25 per 1,000, with scanty sediment and comparatively profuse output of urine, and the absence of changes in the heart or blood-pressure, and of symptoms suggesting uremia.

Zeitschrift für Urologie, Berlin

October, V, No. 10, pp. 801-880

138 *Diastase Content of Urine as Test of Kidney Functioning. (Experimentelle Beiträge zur Prüfung der Nierenfunktion.) J. Wohlgemuth.
139 *Intravesical Removal of Tumors of the Bladder. (Meine Methode der intravesikalen Operation der Blasentumoren.) V. Blum.
140 Variations in the Anatomy of the Ureter Mouths and Trigonum. (Portio intramuralis der Ureteren und Trigonum vesicae. Die Varianten der Formen derselben.) W. N. Schewkunenko.

138. **Diastase Content of Urine as Test of Kidney Functioning.**—Wohlgemuth states that as the elimination of salt, sugar and dyes is reduced in the morbid kidney, so the diastatic ferment is eliminated in lesser proportions. Tests for the amount of diastase in the urine thus throw light on kidney functioning. The technic for the test is merely addition of 1 drop of normal 1/10 solution of iodin to each of ten test-tubes containing progressively increasing amounts of the urine, to each tube having been previously added the same amount of a 1 per cent. solution of starch. The iodin stains the undigested starch blue, while in the tubes in which the action of a diastase is apparent the tint is yellow or orange. He gives the exact technic for a little more complicated test which requires twenty-four hours, and also for the rapid method, complete in half an hour, which is accurate enough for all practical purposes. Experiments on dogs and clinical experiences in forty cases have confirmed the importance of the diastatic ferment in the urine from each kidney separately as an index of the functioning of the kidney involved, the findings being positive in some cases in which the indigo-carmin test gave misleading findings, as was discovered at the operation. The tube showing the transition of tint from orange to purple is the one from which the index is computed.

139. **Intravesical Removal of Bladder Tumors.**—Blum reports fifty-two operations of this kind with his flexible instrument and states that all were successful except in one instance in which threatening hemorrhage compelled a supplementary incision of the bladder.

Zentralblatt für Chirurgie, Leipsic

October 21, XXXVIII, No. 42, pp. 1401-1425

141 Care of Stumps After Resection of Stomach. (Zur Stumpfversorgung nach Magenresektion.) F. P. Reichel. (Zur Behandlung des Duodenalstumpfes bei der Resektionsmethode Billroth II.) K. Schwarz.
142 Speculum for Inspecting Interior of Abdomen. (Beitrag zur Anwendung des röhrenförmigen Spekulums bei Laparatomien.) G. Nyström.

Zentralblatt für Gynäkologie, Leipsic

October 21, XXXV, No. 42, pp. 1453-1480

143 Individual Ampullas with Silver Nitrate for the Eyes of the New-Born. (Weitere Erfahrungen mit meiner Methode der Credéisierung.) H. Hellendall.
144 *Difficulty of Artificial Sterilization of Women. (Zur Schwierigkeit der künstlichen Sterilisation der Frau.) W. Falgowski.

144. **Artificial Sterilization of Women.**—Falgowski declares that the only effectual way to prevent further conception is to suture between the layers of the ligaments the stumps left by excision of the Fallopian tubes. In a gonorrheal case in which he excised the tubes and sutured the remaining ovary in the pouch of Douglas, a fistula developed between the uterus and the abdominal cavity and the woman has been pregnant twice since, although aborting both times.

Gazzetta degli Ospedali e delle Cliniche, Milan

October 12, XXXII, No. 123, pp. 1299-1306

145 Biologic Forensic Tests of the Blood. (Sui veri criteri che governano la prova biologica per la differenziazione della specie del sangue.) G. Sulli.

October 15, No. 124, pp. 1307-1322

146 The Supply of Iron in the Liver at Birth. (Sulla distribuzione del ferro nel fegato dei bambini.) A. Filia.

October 22, No. 127, pp. 1339-1354

147 *Basophil Granules in Red Corpuscles Constant in Lead Poisoning. (Sul valore semejologico delle emazie granulari dei lavoratori del piombo.) G. Collina.

147. **Granulated Red Corpuscles in the Blood in Lead Poisoning.**—Collina found basophil granules in the reds only in 16.66 per cent. of a number of persons who had nothing to do with lead, while they were a constant finding in every one of the persons examined who had been working with lead paints for over five years, and in 87.5 per cent. of those employed at this trade for less than five years. None in either group displayed any other signs of the lead poisoning except one man who had recently had a chronic gastro-enteritis for two years which had then subsided, but the granules were most frequent and numerous in those working the longest with lead. China painting was the trade of most of these patients.

Policlinico, Rome

October, XVIII, Surgical Section No. 10, pp. 433-480

148 Woody Phlegmon of the Neck. (Contributo all'etiologia del flemmone ligneo del collo.) F. Picciniinni.
149 Shape and Location of Arch of Subclavian Artery. (L'arco dell'arteria succlavia.) R. Casali.

Riforma Medica, Naples

October 16, XXVII, No. 42, pp. 1149-1176

150 Negative Fixation of Complement Test in Pellagra. (Alcune esperienze sulla fissazione del complemento nei pellagrosi.) A. Lui and M. Baccelli.
151 *Tuberculosis of the Parotid Gland. (Contributo allo studio della tuberculosi della ghiandola parotide.) L. Fioravanti.

151. **Tuberculosis of the Parotid Gland.**—Fioravanti has recently encountered a case of this kind but could find only thirteen similar ones on record. The patients were nearly all adults and the lesion generally developed as a primary and isolated affection in otherwise healthy individuals. The lesion may be single or with multiple foci, and may be closed or may ulcerate. Treatment can be only surgical, and the isolated lesion is readily removed and the patients are thus completely cured. There are no special symptoms from it. The oldest patients were in the sixties and the youngest a child of 3. The left gland is the one generally involved. Fioravanti's patient was a woman of 34 and transient relief was obtained by incision of the small tumor. After six months it began to increase in size until it was as large as a hen's egg, with a broad base and immovable, when it was removed.

Hospitalstidende, Copenhagen

September 20, LIV, No. 38, pp. 1065-1096

152 Ophthalmoscopic Changes with Otogenic Intracranial Disease. (Om oftalmoskopiske Forandringer ved intrakranielle Lidelser af otogen Natur.) S. Schou. Commenced in No. 37.

September 27, No. 39, pp. 1097-1128

153 *Congenital Spastic Paralysis. (Om Behandlingen af Morbus Little.) H. Scheuermann. Commenced in No. 38.

October 4, No. 40, pp. 1129-1160

154 *Therapeutic Electric Generation of Nascent Jodin. (Metode til terapeutisk Anvendelse af Jod in statu nascendi i Vævene.) A. Reyn.

155 Gastroptosis and Gastropexy. II. L. Kraft.

October 11, No. 41, pp. 1161-1184

156 Bennett's Fracture. V. Meisen.

157 Position of Normal Stomach. (Röntgenundersøgelsen af den normale Ventrikels Leje.) P. K. Faber.

158 Glaucoma as Consequence of Dislocation of the Lens. (Bemærkninger vedrørende Patogenesen af Glaucom som Følge af Linseluxation til forreste Kammer.) C. F. Heerfordt.

153. **Congenital Spastic Paralysis.**—Scheuermann devotes nine pages to tabulation of the details of twenty-five cases of Little's disease, with one of spastic paralysis consecutive to encephalitis and one with hydrocephalus, in all of which it was sought to remedy the condition by multiple operations on tendons and muscles. Recent reexamination has shown constant improvement in twenty-three cases, while no benefit from the operation was perceptible in two of the patients, and two succumbed in collapse a few hours after the operation. The paralysis was extremely severe in one of the unbenefited cases, and rhizotomy was proposed but was refused by the parents. The cerebral diplegia was only mild or moderately severe in the other cases.

154. See Abstract 73, in The Journal, November 18, p. 1729.

Nordiskt Medicinskt Arkiv, Stockholm

XLIV, Internal Medicine No. 1. Last indexed October 28, p. 1500

159 Experiences with the New Drugs in Treatment of Syphilis: None Dethrones Mercury. (Einige Versuche zur Behandlung der Syphilis mit Asurol, Atoxylquecksilber—intramuskulärer und subkutaner—Injektion von Ehrlich's "606" sowie mit Hectine und Hectargyre.) E. Welander.

160 *Albuminuria in Athletes. (Die Anstrengungsalbuminurie. Eine Studie über die Einwirkung maximaler Körperanstrengungen—des Sports und des Trainings—auf die Nieren.) I. Jundell and K. A. E. Fries. Continued.

160. **The Kidneys After Excessive Physical Exertion.**—Jundell and Fries examined 163 athletes after sports of various kinds, 265 times in all, examining 647 specimens of urine, making nine different tests. They compare their findings with similar ones on record, their general conclusion being that sports and athletic training, notwithstanding the apparently serious changes in the urine liable to be encountered, are entirely harmless in the long run for the kidneys. The urine may show albumin and tube-casts over and over again after this excessive physical exertion, for years and decades, but the kidneys are not damaged thereby and are not more predisposed to disease than under other conditions. The changes in the urine after severe exercise resemble closely those of nephritis, except that they gradually subside in the course of a few hours.

Ugeskrift for Læger, Copenhagen

October 19, LXXIII, No. 42, pp. 1533-1578

161 *Motor Insufficiency of the Stomach with Intestinal Disease. (Forsinket Ventrikeltømning ved Tarmlidelser.) A. Borgbjærg.

161. **Motor Insufficiency of the Stomach with Intestinal Disease.**—Borgbjærg discusses the literature on this subject and reports nine cases in which the motor functioning of the stomach was below par, explained by some intestinal trouble and subsiding as the latter was cured. The atony of the stomach was secondary to tapeworm in his first patient, a young woman, but there was no gastric insufficiency in another case of tapeworm. The motor insufficiency in another case was secondary to calcification of a bunch of glands in the mesentery, and gastro-intestinal functioning was restored to normal after resection of the part of the small intestine involved. In two other cases the gastric atony was likewise of reflex origin, due to chronic appendicitis and subsiding after appendectomy. The symptoms resulting from the atony were so pronounced that a gastric ulcer was assumed but no benefit was derived from a course of treatment on this basis. In two other cases the impairment in motor functioning was evidently secondary to a tumor in the cecum—cancerous in one—and normal conditions were restored after its excision. In another case the reflex atony apparently subsided after resection of a tumor which proved to be of tuberculous origin. In four other cases of chronic appendicitis and four of cancer of the large intestine, the motor functioning of the stomach was apparently normal.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

Text-Book of Embryology. By Frederick Randolph Bailey, A.M., M.D., Formerly Adjunct Professor of Histology and Embryology, College of Physicians and Surgeons (Medical Department of Columbia University), and Adam Marion Miller, A.M., Instructor in Anatomy, College of Physicians and Surgeons (Medical Department of Columbia University). Second Edition. Cloth. Price, $4.50 net. Pp. 672, with 515 illustrations. New York: William Wood & Co., 1911.

Audel's Answers on Automobiles for Owners, Operators, Repairmen. Relating to the parts, operation, care, management, road driving, carbureters, wiring, timing, ignition, motor troubles, lubrication, tires, etc., including chapters on the storage battery, electric vehicles, motorcycles, overhauling the car, etc. By Gideon Harris and Associates. Cloth. Price, $1.50. Pp. 476, with 380 illustrations. New York: Theo. Audel & Co., 1912.

Tuberculous Diseases of Bones and Joints. Their Pathology, Symptoms and Treatment. By Sir W. Watson Cheyne, Bart., C.B., F.R.C.S., F.R.S., Professor of Clinical Surgery at King's College Hospital. Second Edition. Cloth. Price, $5.50. Pp. 404, with 170 illustrations. New York: Oxford University Press, 1911.

Die Harnsteine: Ihre Physiographie und Pathogenese. Von Dr. Otto Kleinschmidt, Volontär-Assistenten der Chirurgischen Universitäts-Klinik zu Königsberg i. Pr. Mit einem Vorwort von L. Aschoff, Freiburg i. Br. Paper. Price, 20 marks. Pp. 88, with illustrations. Berlin: Julius Springer, 1911.

Diseases of the Stomach. A Text-Book for Practitioners and Students. By Max Einhorn, M.D., Professor of Clinical Medicine at the New York Post-Graduate Medical School and Hospital. Fifth Edition. Cloth. Price, $3.50 net. Pp. 531, with 112 illustrations. New York: William Wood & Co., 1911.

Der vestibulāre Nystagmus und seine Bedeutung für die neurologische und psychiatrische Diagnostik. Von Dr. M. Rosenfeld, Oberarzt der Psychiatrischen und Nervenklinik zu Strassburg i. E. Paper. Price, 2.40 marks. Pp. 57. Berlin: Julius Springer, 1911.

Grundriss der hämatologischen Diagnostik und praktischen Blutuntersuchung. Ein Leitfaden für Anfänger, Studierende und praktische Aerzte. Von A. Pappenheim. Paper. Price, 12 marks. Pp. 262, with 8 illustrations. Leipzig: Dr. Werner Klinkhardt, 1911.

A Text-Book of Materia Medica for Nurses. Including Therapeutics and Toxicology. By George P. Paul, M.D., Town Health Officer, Round Lake, New York. Second Edition. Cloth. Price, $1.50 net. Pp. 282. Philadelphia: W. B. Saunders Co., 1911.

Minor and Emergency Surgery. By Walter T. Dannreuther, M.D., Surgeon to St. Elizabeth's Hospital and to St. Bartholomew's Clinic, New York. Cloth. Price, $1.25 net. Pp. 226, with 32 illustrations. Philadelphia: W. B. Saunders Co., 1911.

Die Registrierung des Herzschalles. Graphische Studien von Dr. Heinrich Gerhartz, Assistent der Kgl. Universitäts-Poliklinik für innere Kranke zu Berlin. Paper. Price, 8 marks. Pp. 158, with 195 illustrations. Berlin: Julius Springer, 1911.

Forty-Third Annual Report of the Secretary of State on the Registration of Births and Deaths, Marriages and Divorces in Michigan for the Year 1909. Frederick C. Martindale, Secretary of State. Cloth. Pp. 169. 1911.

A Manual of Fevers. By Claude Buchanan Ker, M.D., F.R.C.P., Medical Superintendent, City Hospital, Edinburgh. Cloth. Price, $2.50. Pp. 314, with illustrations. New York: Oxford University Press, 1911.

Transactions of the Medical Association of the State of Alabama (the State Board of Health). Organized 1874—Meeting of 1911. Montgomery, April 18-21. Cloth. Pp. 630.

Report of the Christian Hospital and Training School for Nurses. Paper. Pp. 20, with illustrations. 106 East Jefferson Street, Valparaiso, Ind.

La Fayette Home Hospital and Training School for Nurses. Biennial Statement, 1908-1909. Paper. Pp. 24, with illustrations. La Fayette, Ind., 1911.

Biennial Report of the Superintendent of the Florida Hospital for the Insane. For the Years 1909-1910. Paper. Pp. 28. Tallahassee, Fla.

Report of the Board of Charities of the District of Columbia, 1910. Paper. Pp. 392. Washington: Government Printing Office, 1911.

Report of Missouri Baptist Sanitarium, 1911-1912. Paper. Pp. 45, with illustrations. 919 North Taylor Avenue, St. Louis.

Annual Report of St. Mary's General Hospital, Lewiston, Me., 1910. Paper. Pp. 75.

Annual Report of the Brockton Hospital Company. For the Year 1910. Paper. Pp. 80.

Annual Report of Mercy Hospital, Cadillac, Mich. Paper. Pp. 49. 1911.

Report of Reid Memorial Hospital, Richmond, Ind. Paper. Pp. 31.